C
Ut1 H
1922/23

COLLEGE BULLETINS

lished by the Agricultural College of Utah, at Logan, Utah.
Issued Bi-Monthly. Vol. 22, No. 1.
July, 1922.

AUG 15 1922

Agricultural College of Utah
BULLETIN
General Catalog
1922-1923

1888

Entered as second-class matter, September 10, 1918, at the post office at Logan, Utah, under the Act of August 24, 1912. Acceptance for mailing at special rate of postage provided for in Section 1103, Act of October 3, 1917, authorized August 22, 1918.

THE UTAH AGRICULTURAL COLLEGE has been designated by the War Department as an approved College for the maintenance of Reserve Officers' Training Corps. The College becomes, therefore, a training school for officers. During the year 1922-1923, there will be in operation at the Institution senior reserve officer training units in Coast Artillery and Motor Transport.

The graduates of the College, as experts in food production and conservation, in general agriculture and home economics, and in such technical work as chemistry, physics, bacteriology and branches of engineering, have gone in great numbers into Government service and will be needed in still larger numbers in the future, during the post-war period.

# of the Utah Agricultural (

tes, in a measure, the extensive plant of the Institu
by the College curricula. In addition to the Schools (
graduate courses in the Schools of Engineering, Mech
lucation.

llowing:

Home Economics Building:

- Departments of:
  - Foods and Dietetics
  - Household Administration
  - Textiles and Clothing

Smart Gymnasium:

- Offices of Medical Advisor
- Men's Gymnasium
- Women's Gymnasium
- Swimming Pool and Showers
- Hand Ball Court
- Lockers for Men and Women
- Departments of Physical Education

Plant Industry Building:

- Departments of:
  - Agronomy
  - Botany
  - Plant Pathology

Experiment

- Adminis
  Statio

Animal Hus

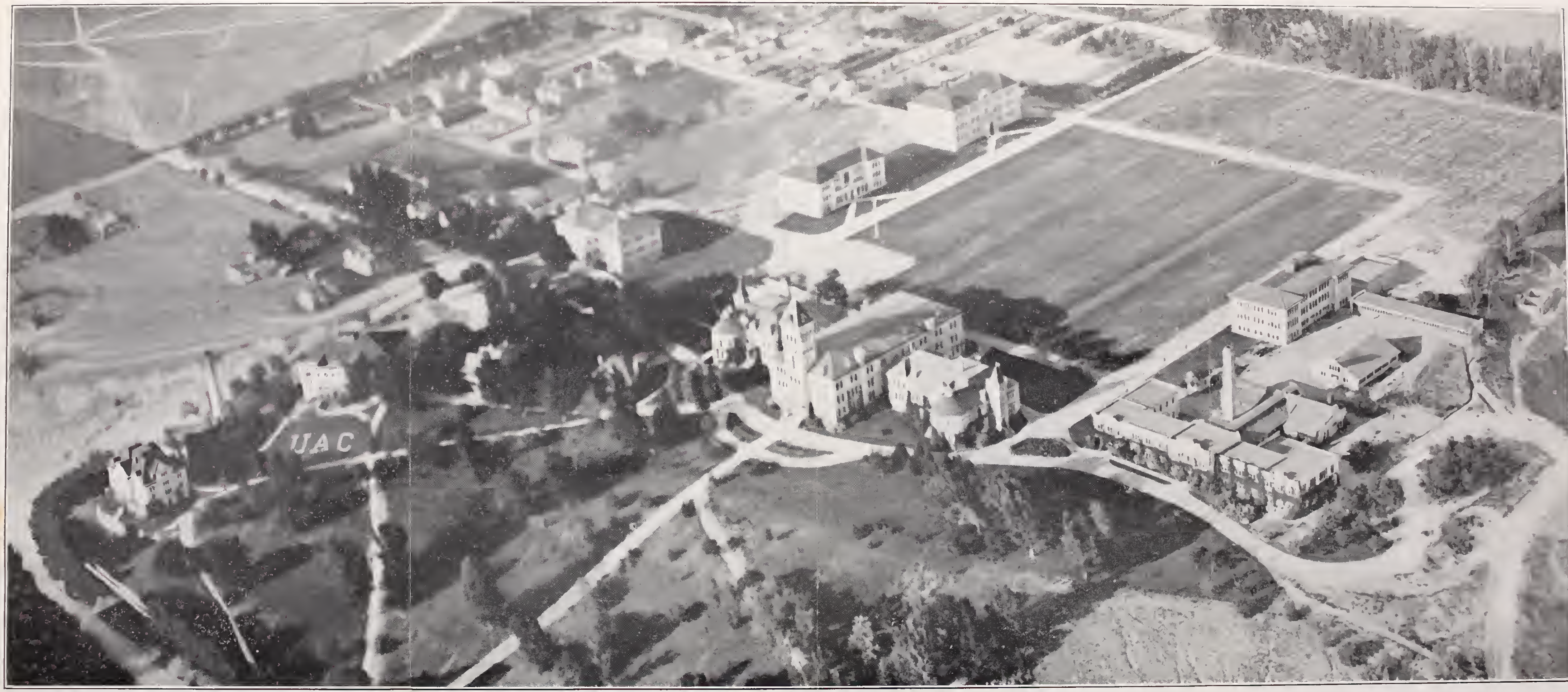
- Departmen
  - Animal
  - Dairy H
  - Poultry
  - Range
  - Veterina

Engineering

- Departmer
  - Agricult
  - Agricult
  - Irrigatic
  - Mechani
  - Military
  - Roads
  - Rural A

d. The Home Economics Cottage, the Cronquist Prac

AIRPLANE VIEW OF THE CAMPUS OF THE UTAH AGRICULTURAL COLLEGE AT LOGAN



Home Economics Building

Heating Plant

Smart Gymnasium

Farm Buildings

President's Residence

Chemistry Building

Experiment Station

Animal Husbandry Building

Main Building

(*See Other Side*)

Plant Industry Building

Mechanic Arts Building

Engineering Building

R. O. T. C. Garage

Auto Shop

Airplane View of the Campus of the Utah Agricultural College

This view of the campus of the Utah Agricultural College indicates, in a measure, the extensive plant of the Institution. The names of the various structures indicate in part the many fields of education covered by the College curricula. In addition to the Schools of Agriculture and Home Economics, the College maintains strong vocational, undergraduate and graduate courses in the Schools of Engineering, Mechanic Arts, Commerce and Business Administration, General Science and in the Department of Education.

The various buildings shown upon the airplane view house the following:

The Main Building:
- General Administrative Offices
- Extension Division
- Departments of:
  - Accounting and Business Practice
  - Agricultural Economics
  - Art
  - Business Administration
  - Correspondence Studies
  - Economics
  - Education and Pedagogy
  - English
  - Entomology
  - Geology
  - History
  - Horticulture
  - Library Economy
  - Marketing
  - Mathematics
  - Modern Languages and Latin
  - Music
  - Political Science
  - Public Speaking
  - Sociology
  - Stenography and Typewriting
  - Zoology

Mechanic Arts Building:
- Departments of:
  - Auto Mechanics
  - Farm Mechanics
  - Forging and General Blacksmithing
  - Machine Work
  - Mechanic Arts
  - Woodwork and Housebuilding

Chemistry Building:
- Departments of:
  - Bacteriology and Physiological Chemistry
  - Chemistry
  - Physics
  - Physiology
  - Rural Public Health
  - Rural Sanitation

Home Economics Building:
- Departments of:
  - Foods and Dietetics
  - Household Administration
  - Textiles and Clothing

Smart Gymnasium:
- Offices of Medical Advisor
- Men's Gymnasium
- Women's Gymnasium
- Swimming Pool and Showers
- Hand Ball Court
- Lockers for Men and Women
- Departments of Physical Education

Plant Industry Building:
- Departments of:
  - Agronomy
  - Botany
  - Plant Pathology

Experiment Station:
- Administrative Offices of Experiment Station

Animal Husbandry Building:
- Departments of:
  - Animal Husbandry
  - Dairy Husbandry
  - Poultry Husbandry
  - Range Management
  - Veterinary Science

Engineering Building:
- Departments of:
  - Agricultural Engineering
  - Agricultural Surveying
  - Irrigation and Drainage
  - Mechanical Drawing
  - Military Science and Tactics
  - Roads
  - Rural Architecture

Part of the farm buildings show indistinctly in the background. The Home Economics Cottage, the Cronquist Practice Farm and the North Logan Experimental Farm are all off the College Campus.

College

tion. The names of the
f Agriculture and Home
anic Arts, Commerce and

Station:

trative Offices of Experiment
n

andry Building:

ts of:
Husbandry
usbandry
Husbandry
anagement
ry Science

Building:

ts of:
ural Engineering
ural Surveying
n and Drainage
al Drawing
Science and Tactics

rchitecture

tice Farm and the North

Agricultural College of Utah

BULLETIN

GENERAL CATALOG
1922-1923

Thirty-third Year

With List of Students for 1921-1922

LOGAN, UTAH

Published by the College
July, 1922

1922—CALENDAR FOR—1923

JANUARY

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

FEBRUARY

S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28				

MARCH

S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

APRIL

S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30						

MAY

S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

JUNE

S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	

JULY

S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

AUGUST

S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	26	26
27	28	29	30	31		

SEPTEMBER

S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

OCTOBER

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

NOVEMBER

S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		

DECEMBER

S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

JANUARY

S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

FEBRUARY

S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28			

MARCH

S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

APRIL

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					

MAY

S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

JUNE

S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

JULY

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

AUGUST

S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

SEPTEMBER

S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30						

OCTOBER

S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

NOVEMBER

S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	

DECEMBER

S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

CONTENTS

Page.

COLLEGE CALENDAR 5

BOARD OF TRUSTEES 6

OFFICERS OF ADMINISTRATION AND INSTRUCTION—
  College Faculty 7
  Experiment Station Staff 23
  Extension Division Staff 25
  Standing Committees 28
  Branch Agricultural College 29
  Officers of State Farm Bureau 31
  County Farm Bureau Presidents 31

LOCATION 32

POLICY 33

HISTORY 33

GOVERNMENT 36

ADMISSION AND GRADUATION 38

JUNIOR AND SENIOR COLLEGE COURSES 41

REQUIREMENTS FOR ADVANCED DEGREES 43

ORGANIZATION 45
  Student Body Organization 46
  Student Clubs 48

STUDENT EXPENSES 50

SCHOLARSHIPS AND AWARDS 53

BUILDINGS AND EQUIPMENT 56
  Equipment 58

THE EXPERIMENT STATION 61

THE AGRICULTURAL ENGINEERING EXPERIMENT STATION 62

THE EXTENSION DIVISION 63
  Administration 64

THE COLLEGE PROPER 66
  School of Agriculture 67
  School of Home Economics 68
  School of Agriculture Engineering 69

Page
School of Commerce and Business Administration 70
School of Mechanic Arts 71
School of General Science 72
Education 73
Summer Quarter 74
SCHEDULE OF WORK REQUIRED FOR GRADUATION...... 75
Summary of Requirements 75
Required Work 64
Technical Division 75
General Division 76
VOCATIONAL COURSES 79
TRADE COURSES 79
SUGGESTED COURSES FOR VARIOUS PROFESSIONS....... 80
Home Economics 80
Commerce and Business Administration 80
Elementary Teachers 83
Smith-Hughes Teacher Training 83
RECITATION TABLE 85
DEPARTMENTS OF INSTRUCTION 86
COURSES OF INSTRUCTION 87
TWENTY-EIGHTH ANNUAL COMMENCEMENT 235
TWENTY-NINTH ANNUAL COMMENCEMENT 237
HONORS, 1921-1922 239
LIST OF STUDENTS, 1921-1922 241
SUMMARY OF ATTENDANCE 271
INDEX 272

College Calendar for 1922-23

(Twelve weeks constitute a quarter; six weeks constitute a term.)

FALL QUARTER

September 25, Monday	Entrance examinations. Registration of former students and of new students admitted on certificates.
September 26, Tuesday	Classes organized.
November 3, Friday	Agricultural Club Ball.
November 30-Dec. 3 (inclusive)	Thanksgiving recess.
December 8, Friday	Debate Try-outs.
December 15, Friday	Periwig Club Play.
December 21, Thursday	Fall Quarter ends.
December 22, Jan. 1 (inclusive)	Christmas recess.

WINTER QUARTER

January 2, Tuesday	Winter Quarter begins.
January 15-20 (inclusive)	Farmers' Convention and Housekeepers' Conference at Logan.
January 22-27 (inclusive)	Extension Division Convention at Logan.
January 22-27 (inclusive)	Scoutmasters' Convention.
January 24, Wednesday	Oratorical Contest, Sons of American Revolution Medal.
February 2, Friday	Commercial Club Ball.
February 5-10 (inclusive)	Farmers' Convention and Housekeepers' Conference at Cedar City.
February 14, Wednesday	Oratorical Contest, Hendricks Medal.
February 21, Wednesday	Military Ball.
February 22, Thursday	Washington's Birthday.
March, 1-2	College Play.
March 17, Saturday	Winter Quarter ends.

SPRING QUARTER

March 19, Monday	Spring Quarter begins.
March 19-24 (inclusive)	Seventh Annual Glee Club tour.
March 28, Wednesday	Oratorical Contest, Casto Medal.
March 30, Friday	Junior Promenade.
April 6, Friday	Freshman Play.
April 15, Sunday	Arbor Day.
April 20, Friday	"A" Day.
April 24, Tuesday	College Science Contest, William Peterson Medal.
May 7, Monday	Conferring of Scholarships and other awards.
May 12, Saturday	May Festival.
May 28, Monday	Senior Chapel.
June 1, Friday	Spring Quarter ends. Annual Alumni business meeting and social.
June 2, Saturday	Commencement and Alumni Banquet and Ball.
June 3, Sunday	Baccalaureate Sermon.

SUMMER QUARTER

June 4, Monday	Summer Quarter begins.
June 8, Friday	Reception to Summer School students.
June 23, Saturday	Annual excursion.
July 4, Wednesday	Independence Day.
July 13, Friday	First term ends.
July 16, Monday	Second term begins.
July 24, Tuesday	Pioneer Day.
August 24, Friday	Summer Quarter ends.

Board of Trustees

ANTHONY W. IVINS	Salt Lake City
FRANK B. STEPHENS	Salt Lake City
ANGUS T. WRIGHT	Ogden
LOIS HAYBALL	Logan
JOHN D. PETERS	Brigham City
W. S. HANSEN	Logan
E. O. HOWARD	Salt Lake City
O. H. BUDGE	Logan
J. H. WATERS	Salt Lake City
C. P. CARDON	Logan
ROBERT L. JUDD	Salt Lake City
H. E. CROCKETT, Secretary of State, ex-officio,	Salt Lake City

OFFICERS OF THE BOARD

ANTHONY W. IVINS	President
FRANK B. STEPHENS	Vice-President
JOHN L. COBURN	Secretary and Treasurer
JOHN T. CAINE	Auditor

COMMITTEES OF THE BOARD

Executive Committee—A. W. Ivins, F. B. Stephens, E. O. Howard.
Agriculture—W. S. Hansen, J. D. Peters, C. P. Cardon.
Mechanic Arts—C. P. Cardon, A. T. Wright, O. H. Budge.
Agricultural Engineering—O. H. Budge, F. B. Stephens, J. D. Peters.
Home Economics—Lois Hayball, F. B. Stephens, H. E. Crockett.
Commerce—J. H. Waters, E. O. Howard, A. T. Wright.
Experiment Station—E. O. Howard, Lois Hayball, O. H. Budge.
Extension Division—J. D. Peters, H. E. Crockett, O. H. Budge.
Faculty and Course of Study—F. B. Stephens, J. D. Peters, R. L. Judd, E. O. Howard, O. H. Budge.
Livestock—W. S. Hansen, C. P. Cardon, J. H. Waters.
Buildings and Grounds—A. T. Wright, Lois Hayball, O. H. Budge, C. P. Cardon.
Power, Heat and Light—A. T. Wright, H. E. Crockett, J. H. Waters, R. L. Judd.
Branch of the Agricultural College—R. L. Judd, O. H. Budge, Lois Hayball.
Legislation and Finance—F. B. Stephens, R. L. Judd, O. H. Budge, H. E. Crockett, J. H. Waters.

Officers of Administration and Instruction*

The College Faculty

(Arranged in Groups in the Order of Seniority of Appointment)

ELMER GEORGE PETERSON........................President

B. S., Utah Agricultural College, 1904; A. M., Cornell University, 1909, Ph. D., 1911. Graduate Student, University of Chicago, 1906; Assistant Professor of Zoology and Entomology, Utah Agricultural College, 1906-08; Instructor and Assistant Professor of Bacteriology, Cornell University, 1909-10; Professor of Bacteriology, Oregon Agricultural College, Bacteriologist, Oregon Experiment Station, 1910-11; Professor of Bacteriology, Utah Agricultural College, 1911-12, Director of Extension Division, 1912-16, President, 1916——

GEORGE WASHINGTON THATCHER......Professor of Music

B. S., Utah Agricultural College, 1914. Student, New England Conservatory of Music; Graduate in Theory, Composition, and Orchestration, under Dr. Percy Goetschius; Special Music Study in Salt Lake City, Boston and New York, under Leading Masters. Professor of Music, Utah Agricultural College, 1905——.

WILLIAM PETERSON............Director of Experiment Station,
Professor of Geology

B. S., Utah Agricultural College, 1899. Instructor in Horticulture and Mathematics, Utah Agricultural College, 1899-1901; Student, University of Chicago, 1901-02, Summers of 1902-03-04; Assistant Professor of Geology and Mineralogy, Utah Agricultural College, 1904-06, Professor of Geology and Physics, 1906-08; Geology field work, 1908-10, Professor of Geology, Utah Agricultural College, 1910—; United States Geological Survey Field Work, Summers 1912-13; Member of State Road Commission, 1914-16; Utah State Geologist, 1917-21; Director, Utah Agricultural College Experiment Station, 1921——.

---

*The College Council consists of the President and all members of the faculty with the rank of Professor, Associate Professor or Assistant Professor.

HYRUM JOHN FREDERICK..................Professor of Veterinary Science

D. V. M., Iowa State College, 1905. Assistant Professor of Veterinary Science, Utah Agricultural College, 1905-06, Professor, 1906——.

FRANK RUSSELL ARNOLD......................Professor of Modern Languages

A. B., Bowdoin College, 1893, M. A., 1902. Graduate Student, Harvard University, Summers of 1893, 94, 99; University of Paris, 1895-96; University of Bordeaux, 1896-97; University of Goettingen, 1897-98; University of Chicago, summers of 1902,03, 04, Instructor, University of Chicago, summer of 1905; Assistant Professor of Modern Languages, Utah Agricultural College, 1904-06, Professor of Modern Languages, 1906——.

JAMES CHRISTIAN HOGENSON...In Charge of Agricultural Correspondence Study, Extension Agronomist

B. S., Utah Agricultural College, 1899; M. S. A., Cornell University, 1906. Student, Michigan Agricultural College, 1902; Scientific Assistant in the Bureau of Soils, United States Department of Agriculture, 1903-05; Agronomist of Experiment Station and Professor of Agronomy, Utah Agricultural College, 1907-11, State Leader of Boys' and Girls' Club Work, 1911-18, Agronomist of Extension Service, In Charge of Agriculture Correspondence Study, 1918——.

JOHN THOMAS CAINE..Auditor

B. S., Utah Agricultural College, 1894, Master Farmer (Honorary Degree), 1915. Student, Cornell University, 1876; Superintendent, Cache County Schools; Superintendent, Logan City Schools; Instructor in English, Utah Agricultural College, 1890-1907, Registrar, 1903-12; Auditor, 1912——.

FRANKLIN LORENZO WEST......................Dean of the Faculty, Professor of Physics

B. S., Utah Agricultural College, 1904; Ph. D., University of Chicago, 1911. Graduate Student, Leland Stanford Junior University, 1904-05; Professor of Physics, Brigham Young University, 1905-06; Graduate Student, University of Chicago, 1906-07, 1910-11, Summers of 1906-07-10-11; Professor of Chemistry, Utah Agricultural College, 1907-

08; Fellow, University of Chicago, 1910-11; Professor of Physics, Utah Agricultural College, 1908——, Director of School of General Science, 1913-21, Dean of the Faculty, 1921——.

JOSEPH EAMES GREAVES............Professor of Bacteriology and Physiological Chemistry

B. S., Utah Agricultural College, 1904; M. S. University of Illinois, 1907; Ph. D., University of California, 1911. Graduate Student, University of Illinois, 1904-07; Instructor in Chemistry, Utah Agricultural College, 1907-08, Assistant Professor, 1908-10; Fellow, University of California, 1910-11; Associate Professor of Physiological Chemistry, Utah Agricultural College, 1911-13; Professor of Bacteriology and Physiological Chemistry, 1913——.

CALVIN FLETCHER..Professor of Art

B. Pd., Brigham Young University, 1905. Assistant Professor of Art, Brigham Young University, 1905; Student at Pratt Institute, 1906-07; Student at Columbia University, 1912; Student at Central School of Arts and Crafts, London, England, 1912-13; Student of M. Biloul and at Academy of Colorossi, Paris, France, 1913; Student at Chicago Art Institute and Art Craft Institute, Chicago, Illinois, 1913-14; Assistant Professor of Art, Utah Agricultural College, 1907-12, Associate Professor, 1912-13, Professor, 1913——.

RAY BENEDICT WEST...Dean of the Schools of Agricultural Engineering and Mechanic Arts, Professor of Agricultural Engineering

B. S., Utah Agricultural College 1904; C. E., Cornell University, 1906. Engineer, Oregon Short Line Railroad, 1906-07; In Charge of Engineering Department, Brigham Young College, 1907-08; Division Engineer, Sumpter Valley Railroad, 1908-09; Consulting Engineer, Portland Oregon, 1909-12; Professor of Agricultural Engineering, Utah Agricultural College, 1912—, Dean of the Schools of Agricultural Engineering and Mechanic Arts, 1916——.

ROBERT JAMES EVANS..................Director, Extension Division

B. S., Utah Agricultural College, 1904; C. E., Cornell Uni-University, 1912. In Charge, Dry Farm Work at the Experiment Station, Utah Agricultural College, 1912; Assistant State County Agent Leader for Utah, 1913; Assistant Director of the Extension Division, Utah Agricultural College, and County Agent Leader for Utah, 1916-20; Director of the Extension Division, 1920——.

GEORGE RICHARD HILL, Jr............Dean of the School of Agriculture, Professor of Botany and Plant Pathology.

B. S., Brigham Young University, 1907; B. S., Utah Agriculture College, 1908; Ph. D., Cornell University, 1912. Instructor in Agriculture, Latter Day Saints University, 1908-09; Graduate Student, Cornell University, 1909-12; Instructor in the Department of Plant Physiology, Cornell University, 1911-12; Research Assistant in the Missouri Botanical Garden, 1912-13; Instructor in Summer School, Cornell University, 1913; Professor of Botany and Plant Pathology, Utah Agricultural College, 1913—; Dean, School of Agriculture, 1916——.

JAMES HENRY LINFORD..................Director, Summer Quarter, Superintendent, Correspondence—Study Department.

B. S., Brigham Young College, 1898; D. Did., (Honorary Degree), Latter Day Saints Board of Education, 1913. Normal School Graduate, University of Utah, 1890; Professor of Geology and Botany, Brigham Young College, 1892-09; Student at the Hopkins Laboratory of Leland Stanford University, Summer Quarter, 1895-96; Student, University of Chicago, Summer Quarter, 1897; President, Brigham Young College, 1900-13; Director of the Summer Quarter and Superintendent of the Correspondence Study Department, Utah Agricultural College, 1913——.

ARTHUR HERBERT SAXER..................Dean, School of General Science, Professor of Mathematics

B. S., Utah Agricultural College, 1910; M. S., University of California, 1912, Ph. D., 1915. Instructor in Physics, Utah Agricultural College, 1910-11; Graduate Student, University of California, 1911-12, Whiting Research Fellow, 1912-13; Professor of Mathematics, Utah Agricultural College, 1913——, Director, School of Home Economics, 1917-21, Dean, School of General Science, 1921——.

NIELS ALVIN PEDERSEN*..............................Professor of English

Graduate, Utah State Normal College, 1901; A. B., University of Utah, 1906; A. M., Harvard University, 1913; Student, University of Chicago, 1901; Critic Teacher, Utah State Normal College, 1901-03; Student, Leland Stanford University, 1903-05; Instructor in Department of Public Speaking, University of Utah, 1906-07; Instructor in English, Utah Agricultural College, 1907-08, Assistant

---

*On Sabbatical Leave.

Professor, 1908-12; Fellow, Harvard University, 1912-13; Professor of English, Utah Agricultural College, 1913——.

WILLIAM ERNEST CARROLL..................Professor of Animal Husbandry

B. S., Utah Agricultural College, 1909; M. S., University of Illinois, 1911, Ph. D., 1914. Fellow, University of Illinois, 1910-11; Assistant Professor of Animal Husbandry, Utah Agricultural College, 1911-12, Associate Professor, 1912-14, Professor, 1914——.

PARLEY ERASTUS PETERSON......Professor of Accounting, Registrar

A. B., Brigham Young College, 1907; C. P. A., 1913, Instructor, History and Economics, Brigham Young College, 1907-09; Graduate Student, Harvard University, 1909-10; Graduate Student, New York University, Summer Quarter, 1910; Instructor in Accounting, Utah Agricultural College, 1911-12, Assistant Professor of Accounting, 1912-13, Professor, 1913——, Registrar, 1915——.

FRANKLIN DAVID DAINES*...Professor of Political Science

A. B., Brigham Young College, 1906; A. M., Harvard University, 1913. Instructor in Mathematics, Brigham Young College, 1906-08; Graduate Student, Harvard University, 1908-10-12-13; Instructor in Social Science, Brigham Young College, 1910-11; Assistant Professor of History, Utah Agricultural College, 1913-17. Professor, 1917-22, Professor of Political Science, 1922——.

JOHN L. COBURN..Secretary and Treasurer

B. S., Utah Agricultural College, 1905. Instructor in Mathematics, Utah Agricultural College, 1907-08, Secretary and Treasurer, 1909——.

JESSIE WHITACRE..................Dean, School of Home Economics, Professor of Foods and Dietetics

B. S., Ohio State University, 1915. Instructor in Home Economics, Extension Division, Ohio State University, 1915-18; Professor of Foods and Dietetics, Utah Agricultural College, 1918——, Dean, School of Home Economics, 1921——.

---

*On Sabbatical Leave.

JOHANNA MOEN..................Professor of Textiles and Clothing

B. S., Utah Agricultural College, 1920. Student, Technical Schools of Norway, 1904-05 and 1914-15; Student, Columbia University, 1915-16; Professor of Textiles and Clothing, Utah Agricultural College, 1920——.

EDGAR BERNARD BROSSARD......Professor of Farm Management and Agricultural Economics

B. S., Utah Agricultural College, 1911; M. S., University of Minnesota, 1917, Ph. D., 1920. Instructor in Mathematics, Utah Agricultural College, 1909-10; Utah State Farm Management Demonstrator, 1914-16; Graduate Student, Cornell University, 1917-18; Assistant Farm Management Demonstrator, University of Minnesota, 1916-17; Instructor in Farm Management, Utah Agricultural College, 1918-19, Professor of Farm Management and Agricultural Economics, 1919——.

REUBEN LORENZO HILL......................Professor of Chemistry

B. S., Utah Agricultural College, 1912; Ph. D., Cornell University, 1915. Fellow, Cornell University, 1913-14, Instructor in Physiological Chemistry, 1915-16; Physiological Chemist, Bureau of Chemistry, United States Department of Agriculture, 1916; Bio-chemist, Maryland Agricultural Experiment Station, 1916-18; Commissioned First Lieutenant, Food Division of the Sanitary Corps, United States Army, 1918; Professor of Chemistry, Utah Agricultural College, 1919——.

GEORGE BALLIF CAINE...........Professor of Dairy Husbandry

B. S., Utah Agricultural College, 1912; A. M., University of Missouri, 1914. Graduate Student, University of Missouri, 1912-14; Assistant Professor of Animal Husbandry, Utah Agricultural College, 1914-16; Assistant Professor of Dairy Husbandry, 1916-17, Associate Professor, 1917-20, Professor, 1920——.

ORSON WINSO ISRAELSEN......Professor of Irrigation and Drainage

B. S., Utah Agricultural College, 1912; M. S., University of California, 1914. Instructor, University of California, 1914; Assistant Professor of Irrigation and Drainage, Utah Agricultural College, 1916-17, Associate Professor, 1917-19, Professor, 1919——.

GEORGE STEWART..........Professor of Agronomy

B. S., Utah Agricultural College, 1913; M. S., Cornell University, 1918. Instructor in Agronomy, Utah Agricultural College, 1913-16; Graduate Student, Cornell University, 1916-17; Assistant Professor of Agronomy, Utah Agricultural College, 1917-18, Associate Professor, 1918-19, Professor, 1919——.

RENA BAKER MAYCOCK......State Leader, Home Demonstration Work, Extension

Instructor, Brigham Young College, Physical Education and English, 1901; Instructor in English, Utah Agricultural College, 1901-03, and 1906-08; Head Dietition, Latter Day Saints Hospital, 1912-13; Dietition, Utah State School for the Deaf and Blind, 1914-16; In Charge of the Home Economics Department, Branch Agricultural College, Cedar City, Utah, 1916-18; State Leader, Home Demonstration Work, 1919——.

WILLIAM LAWRENCE WANLASS..........Dean, School of Commerce and Business Administration, Professor of Business Administration.

A. B., George Washington University, 1915, M. A., 1917; Ph. D., Johns Hopkins University, 1919. Instructor in History, George Washington University, 1916-17; Fellow in Political Science, Johns Hopkins University, 1917-19; Professor of Economics, Union College, Schenectady, New York, 1919-20; Dean, School of Commerce and Business Administration, and Professor of Business Administration, Utah Agricultural College, 1920——.

MILTON HYRUM HARRIS..........Professor of Economics

A. B., Brigham Young University, 1915; A. M., Columbia University, 1917; Ph. D., Columbia University, 1919. Instructor in Economics in the College of the City of New York, 1918-19; State Club Leader, Utah Agricultural College, 1919-21; Professor of Economics, Utah Agricultural College, 1921——.

DAVID EARLE ROBINSON..........Professor of Marketing, In Charge, Information-Service

B. S., Utah Agricultural College, 1911. Instructor in History, Utah Agricultural College, 1911-14; Graduate Student, University of California, 1914-15; Assistant Professor of English, Utah Agricultural College, 1916-17; In Charge of Department of Information Service, 1916—; Assistant Professor of History, 1917-21, Professor of Marketing, 1921——.

HENRY PETERSON......Professor of Education and Pedagogy

A. B., Brigham Young University, 1894; Ph. B., University of Chicago, 1905; A. M., Harvard University, 1906. Graduate Student, Harvard University, 1907; Dean, Church Teachers College, Brigham Young University, 1909-11; Superintendent, Box Elder County Schools, 1911-12; Principal, Ogden High School, 1912-14; Superintendent, Logan City Schools, 1918-21; Professor of Education and Pedagogy, Utah Agricultural College, 1921——.

IRA MYRON HAWLEY........................Professor of Zoology and Entomology

B. A., University of Michigan, 1909; Ph. D., 1916. Instructor, Oak Grove Seminary, Vassal, Maine, 1909-10; Student, Bradley Polytechnic Institute, Peoria, Illinois, 1910-12; Instructor and Graduate Student, Cornell University, 1912-16, Investigator, 1917-21; Professor of Zoology and Entomology, Utah Agricultural College, 1921.

ALEXANDER C. SULLIVAN......Professor of Military Science and Tactics

B. S., Cornell University, 1908. Major, Coast Artillery Corps, United States Army. Assistant Professor of Military Science and Tactics, Utah Agricultural College, 1920-21, Professor, 1921——.

GARLAND GREEVER....................................Professor of English, Acting Head of Department

A. B., Central College, 1904; A. M., Trinity College, 1905; Ph. D., Harvard University, 1914. Associate Professor of English, University of Arkansas, 1908-12; Sheldon Traveling Fellow in Europe, from Harvard University, 1914-15; Associate Professor of English, Washington and Lee University, 1915-17; Head of the Department of English, University of Manitoba, 1920-21; Acting Head, Department of English, Utah Agricultural College, 1922——.

JOEL RICKS..Professor of History

A. B,. University of Utah; A. M., University of Chicago, 1920. President, Weber Normal College, 1920-22; Professor of History, Utah Agricultural College, 1922——.

AUGUST J. HANSEN..........Associate Professor of Carpentry and Woodwork

B. S., Utah Agricultural College, 1911. Instructor, Utah Agricultural College, 1911-13, Assistant Professor of Carpentry and Woodwork, 1913-19, Associate Professor, 1919——.

AARON NEWEY..........Associate Professor of Machine Work

B. S., Utah Agricultural College, 1912. Student, Stourbridge Technical School, England, 1894-1900; Assistant in Carpentry, Utah Agricultural College, 1906-07, Instructor in Forging, 1907-14, Assistant Professor of Forging, 1914-17, Associate Professor, 1917——.

CHARLES ROBERT JOHNSON..........Associate Professor of Music

Graduate, Brigham Young University, Normal School, 1908; Graduate, National Summer School of Chicago, 1908-11; Student, Columbia Music School, Chicago, 1908-11; Student of A. C. Lund, Salt Lake City, 1901-02-03, Mrs. Cheney, New York, Summers, 1908-09, Arthur Burton, Chicago, 1909-10, George Hamlin, New York, 1910, Frederick E. Chapman, Boston, 1908-11, A. Cyril Greham, Chicago, 1909-10; Professor of Music, Brigham Young University, 1911-16; Assistant Professor of Music, Utah Agricultural College, 1916-17, Associate Professor, 1917——.

WILLARD GARDNER..........Associate Professor of Physics

B. S., Utah Agricultural College, 1912; M. S., University of California, 1915; Ph. D., University of California, 1916. Principal, Murdock Academy, 1916-17; Instructor in Physics, University of California, 1913-16; Professor of Physics and Mathematics, Brigham Young College, 1918-19; Associate Professor of Physics, Utah Agricultural College, 1919——.

BERT LORIN RICHARDS..........Associate Professor of Botany and Plant Pathology

B. S., Utah Agricultural College, 1913, M. S., 1917; Ph. D., University of Wisconsin, 1919. Instructor, Utah Agricultural College, 1913-15, Assistant Professor of Botany and Plant Pathology, 1915-17; Student, University of Chicago, Summer Quarter, 1916; Fellow, University of Wisconsin, 1917; Associate Professor of Botany and Plant Pathology, Utah Agricultural College, 1919——.

WILLIAM BOWKER PRESTON..........Medical Supervisor of Students, Acting Assistant Surgeon, U. S. Public Health Service

M. D., University of Illinois, 1916. Graduate Work, West Side Hospital, Chicago, Illinois, 1916; Captain, Medical Corps, U. S. Army, 1917-19; Medical Supervisor of Students and Acting Assistant Surgeon, U. S. Public Health Service, Utah Agricultural College, 1920——.

LUTHER MURKINS WINSOR..........Associate Professor of Irrigation and Drainage

B. S., Utah Agricultural College, 1911. Instructor in Irrigation, Extension Division, Utah Agricultural College, 1913-15, Assistant Professor of Irrigation and Drainage, 1915-20, Associate Professor, 1921——.

ALBERT H. POWELL....................Associate Professor of Farm Machinery

Four Years, Apprentice Machinist; Four Years, Iron, Bronze, and Steel Foundryman Apprentice; Qualified as Mechanical Engineer and Shop Superintendent, International Correspondence Schools, Scranton, Pa.; Assistant in Automobile and Tractor Work, Utah Agricultural College, 1918-19, Assistant Professor of Machine Work, 1919-20, Associate Professor of Farm Mechanics, 1920——.

GUSTAV WILSTER..........................Associate Professor of Dairy Husbandry

B. S., Iowa State College, 1920, M. S., 1921. Student, Queensland Agricultural College, Australia, 1917; Assistant Professor of Dairy Husbandry, Utah Agricultural College, 1921-22, Associate Professor, 1922——.

KATHARINE M. COOPER......Associate Professor of Physical Education for Women

B. S., Teachers College, Columbia University, 1918. Diploma, State Normal School, Montclair, New Jersey, 1916; Tilestan Scholarship, Teacher's College, Columbia University, 1917-18; Instructor in Physical Education, Barnard College, 1918-21; Associate Professor of Physical Education for Women, Utah Agricultural College, 1922——.

BYRON ALDER......Assistant Professor of Poultry Husbandry

B. S., Utah Agricultural College, 1912. Assistant Professor of Poultry Husbandry, Utah Agricultural College, 1912——.

CHARLES TARY HIRST......Assistant Professor of Chemistry

B. S., Utah Agricultural College, 1910, M. S., 1914. Instructor in Chemistry, Utah Agricultural College, 1910-15; Graduate Student, University of California, 1918-19; Assistant Professor of Chemistry, Utah Agricultural College, 1915——.

CHARLOTTE KYLE........................Assistant Professor of English

B. A. and M. A., Park College. Instructor in English, Utah Agricultural College, 1907-16, Assistant Professor, 1916——.

JOSEPH R. JENSON..................................Assistant Professor of Physical Education

A. B., Brigham Young College, 1909. Assistant Professor of Physical Education, Utah Agricultural College, 1917—; Recreational Director, Mather Field Flying School, Sacramento, California, 1918; Graduate Student, University of Wisconsin, Summer of 1912, Columbia University, Summer of 1916, University of California, Summer of 1919.

WILLIAM WHITE OWENS....................County Agent Leader, Extension

B. S., Utah Agricultural College, 1916. County Agent, Sevier County, 1916-18; District County Agent for Southern Utah, 1918-19; Assistant State County Agent Leader for Utah, 1919-20, County Agent Leader, 1920——.

RAYMOND J. BECRAFT*..........................Assistant Professor of Range Management

B. S., Utah Agricultural College, 1917. Grazing Examiner, United States Forest Service, 1917-19; Assistant Professor of Range Management, Utah Agricultural College, 1919——.

E. LOWELL ROMNEY...Director of Athletics

A. B., University of Utah, 1918. Second Lieutenant, U. S. Army, 1918-19; Assistant Professor of Physical Education and Director of Athletics, Utah Agricultural College, 1919——.

---

*On Leave of Absence.

TRACY H. ABELL..............Assistant Professor of Horticulture

B. S., Montana Agricultural College, 1915; M. S., Oregon Agricultural College, 1917. Instructor in Horticulture, Utah Agricultural College, 1917-19, Assistant Professor, 1919——.

EZRA G. CARTER..............Assistant Professor of Bacteriology and Physiology

B. S., Utah Agricultural College, 1913, M. S., 1918. Instructor in Bacteriology, Utah Agricultural College, 1914-17, Assistant Professor of Bacteriology and Physiology, 1918——.

WILBER E. THAIN..............Assistant Professor of Accounting

B. S., Utah Agricultural College, 1914; C. P. A., 1919. Instructor in Accounting, Utah Agricultural College, 1914-17, Graduate Student, 1914-16; Instructor in Accounting, University of Wisconsin, Extension Division, 1918-19; Assistant Professor of Accounting, Utah Agricultural College, 1919——.

WALLACE J. VICKERS..........Assistant Professor of English

B. S., Utah Agricultural College, 1912. Graduate Student, University of Chicago, Summer Quarter 1916 and 1916-17; Instructor in English, Latter Day Saints University, 1917-19, Head of the Department, 1919-20; Assistant Professor of English, Utah Agricultural College, 1920——.

LEON D. HARDY..............Assistant Professor of Economics, Correspondence-Study

B. S., Utah Agricultural College, 1917. Assistant, Correspondence-Study Department, Utah Agricultural College, 1917-20, Assistant Professor of Economics, 1920——.

CHARLES CHALLICE, Jr......Assistant Professor of Military Science and Tactics

Captain, Quartermaster Corps, U. S. Army. Assistant Professor of Military Science and Tactics, Utah Agricultural College, 1920——.

HERBERT J. PACK....................Assistant Professor of Zoology and Entomology

B. S., Utah Agricultural College, 1913. Instructor in Zoology, Utah Agricultural College, 1913-14; Professor of Biology, Latter-Day Saints University, 1914-18; Assistant Professor of Zoology and Entomology, Utah Agricultural College, 1920——.

SHERWIN MAESER..................Assistant Professor of Chemistry

A. B., Brigham Young University, 1909; Ph. D., University of California, 1921. Graduate Student, University of Chicago, 1915-16; Professor of Physics, Brigham Young University, 1916-19; Graduate Student and Assistant in Chemistry, University of California, 1919-21; Assistant Professor of Chemistry, Utah Agricultural College, 1921——.

DON WARREN PITTMAN...Assistant Professor of Agronomy

B. S., Iowa State College, 1914; M. S., Utah Agricultural College, 1916. Instructor in Agronomy, Utah Agricultural College, 1916-20, Assistant Professor of Agronomy, 1920——.

SAMUEL ROY EGBERT............Assistant Professor of Forging

Assistant in Forging, Utah Agricultural College, 1920-21; Assistant Professor, 1921——.

CHARLOTTE DANCY..................Assistant Professor of Nursing,
Dean of Women

Graduate Nurse, Johns Hopkins Training School, 1896; Head Nurse, Johns Hopkins Training School, 1896-1901; Assistant Superintendent of Nurses, University Hospital, Columbus, Ohio, 1901-02; In Charge, District Nursing Work in Newark, 1903-06; Graduate Student, Battle Creek Sanitarium and Instructor in Mental Hospital, Elgin, 1906-08; In Charge, Surgical Department, 1908-10; Superintendent of Nurses, Latter Day Saints Hospital, 1910-20; In Charge, Home Health and Nursing, Extension Division, Utah Agricultural College, 1920-21, Assistant Professor of Nursing, 1921——.

IVA MAUD DUNN......Assistant Professor of Public Speaking

Ph. B., University of Chicago, 1920. Associate Professor, State Normal College, Peru, Nebraska, 1916-19, 1920-21; Assistant Professor of Public Speaking, Utah Agricultural College, 1921——.

HENRY OBERHANSLY......Assistant Professor of Education
and Pedagogy

A. B., Brigham Young University, 1914. Assistant State Leader, Junior Vocational Work, Extension Division, Utah Agricultural College, 1918-19, Live Stock Specialist, Extension Division, 1919-20; Student, Iowa State College, Spring Quarter, 1920; Assistant Professor of Education and Pedagogy, Utah Agricultural College, 1921——.

ALICE KEWLEY..........................Assistant Professor of Education and Pedagogy, Superintendent of Practice Home

B. S., Utah Agricultural College, 1910. Instructor, Nephi High School, 1910-13, Granite High School, 1913-21; Assistant Professor of Education and Pedagogy, Utah Agricultural College, 1921——.

FREDERIC C. BRAITHWAITE......Assistant Professor of Art

B. S., Utah Agricultural College, 1918. Student, Halifax Art School, England; Head of Art Department, Branch Agricultural College, 1919-21; Head of Art Department, Ogden High School, 1921-22; Assistant Professor of Art, Utah Agricultural College, 1922——.

EDMUND FELDMAN, C. E.............................Assistant Professor of Agricultural Engineering

WILFORD J. MERRILL........................Secretary to the President

B. S., Utah Agricultural College, 1922. Secretary to the Director of the Experiment Station, 1916-17; Secretary to the President, 1920——.

LAVINA RICHARDSON......Instructor in Textiles and Clothing

B. S., Utah Agricultural College, 1915. Instructor in Textiles and Clothing, Utah Agricultural College, 1915——.

AARON F. BRACKEN....................................Instructor in Agronomy

B. S., Utah Agricultural College, 1914. Foreman, Nephi Experiment Station, 1914-17; Instructor in Farm Management, Extension Division, Utah Agricultural College, 1917-18, Investigator in Agronomy, Experiment Station, 1918-22, Instructor in Agronomy, 1922——.

HATTIE SMITH..Assistant Librarian

Assistant Librarian, Utah Agricultural College, 1907—; Student, University of California, Summer Quarters, 1917-18.

N. E. EDLEFSEN*..Instructor in Physics

B. S., Utah Agricultural College, 1916. Instructor in Physics, Utah Agricultural College, 1916——.

---

*On Leave of Absence.

DAN ARTHUR SWENSON..................Instructor in Carpentry and Woodwork

B. S., Utah Agricultural College, 1915; In Business, Picture Framing and Mounting, 1907-09; Planing Mill Work, 1912-13; Assistant in Carpentry and Woodwork, Utah Agricultural College, 1913-16; Student, Summer Quarter, Armour Institute of Technology, 1919; Instructor, Carpentry and Woodwork, Utah Agricultural College, 1916—.

PETER NELSON..................Farm Foreman

B. S., Utah Agricultural College, 1920. Farm Foreman, Utah Agricultural College, 1920——.

LOUIS F. NUFFER..................Instructor in Botany

B. S., Utah Agricultural College, 1918. Instructor in Botany, Utah Agricultural College, 1918——.

ASA BULLEN..................Special Lecturer in Commercial Law

B. S., Utah Agricultural College, 1910; LL. B., Harvard University, 1913. Lecturer in Law, Utah Agricultural College, 1917—. Judge of the Logan City Court, 1919——.

WINNIFRED SMITH..........Instructor in Foods and Dietetics

B. S., Utah Agricultural College, 1919. Instructor in Foods and Dietetics, Utah Agricultural College, 1920——.

EMIL HANSEN..............Superintendent of Grounds and Greenhouses, Landscape Gardener, Extension

Graduate, Technical School in Landscape Gardening, Denmark; Fellow, Royal Garden Association, 1895-97; Instructor, Stormly School of Gardening, Norway, 1897-99; Landscape Gardener, Wandamere Park, Salt Lake City, 1904-06; Landscape Gardener, Rose City Cemetery, Portland, 1906-14; Superintendent, Grounds and Greenhouses, Utah Agricultural College, 1914—. Assistant in Horticulture, 1918-20, Instructor, 1920——.

DEAN S. CARDER..................Instructor in Geology

B. S., Oregon Agricultural College, 1921. Instructor in Geology, Utah Agricultural College, 1921——.

ARTHUR FIFE..................Instructor in Irrigation and Drainage

B. S., Utah Agricultural College, 1919. Assistant in Irrigation and Drainage, Utah Agricultural College, 1919-21. Instructor, 1921——.

THELMA FOGELBERG..........................Instructor in Stenography and Business Practice

Student, Utah Agricultural College, 1917-19; Instructor in Stenography and Business Practice, Utah Agricultural College, 1919——.

RAE L. ORMSBY..................Instructor in Textiles and Clothing

Instructor in Textiles and Clothing, Utah Agricultural College, 1920——.

SIDNEY STOCK..................................Instructor in Farm Machinery

B. S., Utah Agricultural College, 1922. Instructor in Auto Mechanics, Utah Agricultural College, 1921-22; Instructor in Farm Machinery, 1922——.

C. H. STEPHENS................................Instructor in Auto Mechanics

Instructor in Auto Mechanics, Utah Agricultural College, 1921——.

HUGH HURST...................................Instructor in Veterinary Science

D. V. M., Colorado Agricultural College, 1916. County Agent, Utah, 1918-21; Instructor in Veterinary Science, Utah Agricultural College, 1921——.

EARL THOMPSON......Instructor in English and Mathematics

Graduate, University of Utah Normal School, 1904; Student, Chicago University, Summer Quarters, 1913-14-18; Instructor, English and Mathematics, Utah Agricultural College, 1921——.

CHARLES E. McCLELLAN............................Instructor in English and Education

A. B., Brigham Young University, 1914. Superintendent, Schools, Rigby, Idaho, 1914-15; Student, Summer Quarter, University of California, 1915; Principal, Millard Academy, 1915-17; Superintendent, Schools, Rigby, Idaho, 1917-20; Instructor in English and Education, Utah Agricultural College, 1921——.

E. J. YONK..Instructor in Auto Mechanics

Instructor in Auto Mechanics, Utah Agricultural College, 1921——.

L. A. SHOOK..Instructor in Auto Mechanics

Student, West Virginia State Normal School, 1908-10; Instructor in Auto Mechanics, Utah Agricultural College, 1919——.

ABBY GROESBECK..........Assistant Registrar

Assistant Registrar, Utah Agricultural College, 1914——.

DAVID HUGHES..........Assistant in Carpentry and Woodwork

Instructor in Technical School, Liverpool, England, 1905-07; Assistant in Carpentry and Woodwork, Utah Agricultural College, 1908——.

JAMES McGRATH..........Assistant in Military Science and Tactics

Sergeant, U. S. Army, (Retired).

CHARLES BATT..........Superintendent of Water, Heat, and Lighting Plant

RASMUS OLUF LARSEN..........Superintendent of Buildings

Experiment Station Staff

WILLIAM PETERSON, B. S.
Director; Geologist

HYRUM JOHN FREDERICK, D. V. M.
Veterinarian

FRANKLIN LORENZO WEST, Ph. D.
Physicist

JOSEPH EAMES GREAVES, Ph. D.
Chemist and Bacteriologist

WILLIAM ERNEST CARROLL, Ph. D.
Animal Husbandman

GEORGE RICHARD HILL, Jr., Ph. D.
Botanist

GEORGE BALLIF CAINE, A. M.
Dairying

EDGAR BERNARD BROSSARD, Ph. D.
Farm Management

REUBEN LORENZO HILL, Ph. D.
Human Nutrition

GEORGE STEWART, M. S.
Field Crops.

ORSON WINSO ISRAELSEN, M. S.
Irrigation and Drainage

WILLIAM LAWRENCE WANLASS, Ph. D.
Marketing

IRA M. HAWLEY, Ph. D.
Entomologist

BYRON ALDER, B. S.
Poultryman
DAVID STOUT JENNINGS, Ph. D.
Soil Surveys

RAYMOND J. BECRAFT, B. S.*
Range Management

WILLARD GARDNER,, Ph. D.
Associate Physicist

BERT LORIN RICHARDS, Ph. D.
Associate Botanist

LUTHER MURKINS WINSOR, B. S.
Associate in Irrigation and Drainage

CHARLES TARRY HIRST, M. S.
Associate Chemist

EZRA G. CARTER, B. S.
Associate Bacteriologist

MOYER DELWYN THOMAS, A. B., B. Sc.
Associate Agronomist

GUSTAV WILSTER, M. S.
Associate Dairyman

DON WARREN PITTMEN, M. S.
Assistant Agronomist

TRACY H. ABELL, M. S.
Assistant Horticulturist

---

* On leave of absence

HERBERT J, PACK, B. S.
Assistant Entomologist

LOUIS F. NUFFER, B S.
Assistant Botanist

ARTHUR J. FIFE, B. S.
Assistant in Irrigation

AARON F. BRACKEN, B. S.
Superintendent, Nephi Substation

ALMA L. WILSON, B. S.
Superintendent, Davis County Farm

J. R. BATEMAN, B. S.
Superintendent, Panguitch Farm

PETER NELSON, B. S.
Farm Superintendent

JOHN L. COBURN, B. S.
Secretary and Purchasing Agent

BLANCHE CONDIT-PITTMAN, A. B.
Clerk and Librarian

DAVID A. BURGOYNE, B. S.
Director's Secretary

Extension Division Staff

ROBERT JAMES EVANS, Ph. D.
Director

JAMES CHRISTIAN HOGENSON, M. S. A.
Extension Agronomist

JOHN T. CAINE, III.
Livestock Specialist

BERT LORIN RICHARDS,
Pathologist

LUTHER M. WINSOR,
Irrigation Specialist

BYRON ALDER,
Poultry Specialist

RENA BAKER MAYCOCK,
State Leader, Home Demonstration Work.

WILLIAM WHITE OWENS, B. S.
County Agent Leader

BEN R. ELDREDGE, B. S.
Assistant Professor of Dairying

JOSEPH PRESTON WELCH, B. S.
Assistant Professor; County Agent, Utah County

ROBERT HASLAM STEWART, B. S.
Assistant Professor; County Agent, Box Elder County

HANS A. CHRISTIANSEN, B. S.
Assistant Professor; County Agent, Beaver County

W. PRESTON THOMAS,
Assistant Professor; County Agent, Weber County

JOHN HYRUM WITTWER, B. S.
Assistant Professor; County Agent, Uinta County

ROBERT L. WRIGLEY, B. S.
Assistant Professor; County Agent, Cache County

ORSON P. MADSEN, B. S.
Assistant Professor; County Agent, Carbon County

EZRA R. PRICE, B. S.
Assistant Professor; County Agent, Iron County

GEORGE F. HOLMSTEAD, B. S.
Assistant Professor; County Agent, Sevier County

VERE L. MARTINEAU, B. S.
Assistant Professor; County Agent, Salt Lake County

ROZINA SKIDMORE, B. S.
Assistant Professor of Domestic Arts

WILLIAM J. THAYNE, B. S.
Assistant Professor; County Agent, Davis County

ALBERT E. SMITH, B. S.
Assistant Professor; County Agent, Millard County

ARCHIE L. CHRISTIANSEN, B. S.
Assistant Professor; County Agent, Tooele County

ANNA EDMUNDS PIXTON, B. S.
Assistant Professor; Home Demonstration Work, Salt Lake County

CHARLES O. STOTT, B. S.
Assistant Professor; County Agent, Sanpete Countyy

STEPHEN ROY BOSWELL, B. S.
Assistant Professor; County Agent, Summit County

ELLEN AGREN, B. S.
Assistant Professor; Home Demonstration Agent, Weber County

DE LORE NICHOLS, B. S.
Assistant Professor; County Agent, Morgan County

AMY J. LEIGH, B. S.
Assistant Professor; Assistant Home Demonstration Leader

CHRISTINE B. CLAYTON, B. S.
Assistant Professor; District Home Demonstration Agent

KATHERINE ADAMS, B. S.
Assistant Professor; District Home Demonstration Agent

LILLIAN ELDER, B. S.
Assistant Professor; District Home Demonstration Agent

FOREST SLAUGH,
Instructor; Club Leader, Uinta County

GLADYS CHRISTENSEN, B. S.
Instructor; Assistant State Club Leader

MORGAN McKAY, B. S.
Instructor; County Agent, Southern Utah

VICTORIA B. CHRISTENSEN,
Specialist, Home Health and Nursing

IDA R. MITCHELL,
Clerk

Standing Committees

1922-1923

The President of the College is ex-officio a member of each standing committee.

Advanced Standing—Professor Richards.

Attendance and Scholarship—Professors F. L. West, Jenson, Hawley, Sullivan, Dancy.

Athletic Council—Professors Ray B. West (Chairman) Jenson, Romney (representing the Faculty); Professors George R. Hill, Jr., George B. Caine, Mr. John H. Bankhead (representing the Alumni); S. R. Harris, Claude Lindsay, Joseph Maughan (representing the Student Body).

Awards and Honors—Professors Wanlass, Linford, Mr. Coburn.

Boy Scout Activity—Professors George R. Hill, Jr., Hogenson, Brossard, Henry Peterson, Fletcher, Sullivan, Preston, Oberhansly.

Campus Improvement—Professors Ray B. West, William Peterson, George R. Hill, Jr., Fletcher, Mr. Emil Hansen.

College Editor—Professor Robinson.

Debating—Professors Wanlass, Carroll, Ricks, Israelsen, Miss Smith.

Entrance—Professors Harris, Hirst, Gardner, Maeser.

Exhibits—Professors ...., Fletcher, Israelsen, Hansen, Braithwaite.

Graduate Work—Professors F. L. West, Saxer, William Peterson, Greaves.

Graduation—Professor Saxer.

High School Relations—Professors Henry Peterson, Wanlass, Robinson.

Library—Professors George R. Hill, Jr., Wanlass, Ricks.

Lyceum—Mr. Coburn.

Publicity—Professors Arnold, Robinson.

Recommendations for Employment—Professor Henry Peterson.

Schedule—Professor Saxer.

Student Affairs—Professor Jenson.

Student Body Organization—Professors Bullen, Jenson, Vickers.

Student Employment—Mr. W. J. Merrill, Mr. David Burgoyne, Mr. Peter Nelson.

Branch Agricultural College of Utah
At Cedar City

OFFICERS OF ADMINISTRATION AND FACULTY

ELMER GEORGE PETERSON, A. M., Ph. D.
President

……………………………………
Director

PARLEY DALLEY, B. S.
Instructor in Physical Science and Mathematics

JOHN L. COBURN, B. S.
Financial Secretary

JOHN S. CHRISTENSEN, B. S.
Director of Physical Education, Instructor in Animal Husbandry

GEORGE H. LUNT, A. B.
Instructor in History, Economics, Commercial Law

GILBERT L. JANSON, A. M.
Instructor in Commercial Subjects.

JOHN H. PENDLETON, B. S.
Instructor in Woodwork, Mechanical Drawing, Mathematics

ANNA W. E. PETTIGREW
Librarian

GEORGE A. CROFT, B. S.
Instructor in Mechanic Arts and Mathematics

CHRISTINE B. CLAYTON, B. S.
Instructor in Domestic Science

H. CLAUDE LEWIS, B. S.
Instructor in Psychology and Education

....
Instructor in Physical Education for Women

MARY URIE
Instructor in Domestic Art

D. L. SARGENT, B. S.
Instructor in Agriculture; Superintendent of Farms

NORMAN McCARTY
Instructor in Music, Director Band and Orchestra

MYRTLE D. JANSON, A. B.
Instructor in English and Elocution

ELIZABETH LINDSAY
Training Teacher

CLAIRE WOODWARD
Registrar

BERNELLA GARDNER
Instructor in English

JAMES H. WEST
Instructor in Music

MARGARET WHITING
Instructor in Art

ADA WHITAKER
Instructor in Domestic Art and Political Science

FRANCES FENTON
EMMA SHARP
TILLIE WINSOR
REILLA KEELER
Critic Teachers in Training School

....
Secretary

WILLIAM FLANIGAN
Engineer

CHARLES SLAUGHTER
Superintendent of Buildings and Grounds

....
In Charge of Dairy

Officers of the Utah State Farm Bureau

Ephraim Bergeson	President, Cornish
David N. Beal	Vice-President, Ephraim
M. K. Jacobs	Secretary, Ogden, R. D.
George E. Holt	Treasurer, Clearfield, R. D.
L. L. Bunnell	Director, Provo, R. D.
John F. Burton	State Representative, A. F. B. F.

County Bureau Presidents

Beaver County	Robert B. White
Box Elder County	John A. Ward
Cache County	Ephraim Bergeson
Carbon County	J. R. Sharp
Davis County	George E. Holt
Emery County	O. W. Sitterud
Iron County	A. P. Spillsbury
Juab County	J. W. Paxman
Morgan County	J. T. Waldron
Millard County	O. L. Robinson
Piute County	Charles Morrill
Sanpete County	George Cox, Jr.
Salt Lake County	A. E. Lee
Sevier County	D. P. Jensen
Summit County	E. F. Robertson
Tooele County	John M. McKellar
Utah County	L. L. Bunnell
Wasatch County	Frederick Crook
Weber County	James R. Beus

Agricultural College of Utah

LOCATION

The Agricultural College of Utah is in Logan, the county seat of Cache county, one of the most prosperous agricultural counties in the State. The city has a population, thrifty and progressive, of about 10,000; it is quiet, orderly, clean and generally attractive, with neat homes, substantial public buildings, electric lights, a sewer and a water system. The main streets are paved and cement walks ramify the city; an excellent street car line extends from the station to the College and the interurban connects Logan with other towns of the valley as well as with Salt Lake City.

The College, uniquely situated on a broad hill overlooking the city, one mile east of Main street, commands a view of the entire valley and surrounding mountain ranges. The site of the College was formed by the receding waters of prehistoric Lake Bonneville which built an enormous delta at the mouth of Logan canyon upon which the College buildings and farm are located. The beauty and geological significance of the location are perhaps unsurpassed. A few hundred yards to the south is the Logan river. A mile to the east is a magnificent mountain range with a picturesque canyon. In other directions are the towns and farms of Cache County distinctly visible through the clear atmosphere. The valley is a fertile, slightly uneven plain, 4,600 feet above sea level, about twelve by sixty miles in dimensions, almost entirely under cultivation and surrounded by the Wasatch mountains. It is one of the most attractive and healthful valleys in the West.

POLICY

The Agricultural College of Utah provides, in accordance with the spirit of law under which it was organized, a liberal, thorough and practical education. The two extremes in education, empiricism and the purely theoretical, are avoided; for the practical is based upon, and united with the thoroughly scientific. In addition to the practical work of the different courses, students are given thorough training in the sciences, mathematics, history, English, art, modern languages and other related subjects. The object is to foster all that makes for right living, good citizenship and high efficiency.

Under this general policy, the special purpose of the Agricultural College of Utah is to be of service in the upbuilding of the State and the great West to which it belongs. The instruction in agriculture and agricultural engineering, therefore, deals with the special problems relating to the conquest of the great areas of unoccupied lands, the proper use of the water supply and the kinds of crop or live stock which in Utah may be made most profitable; instruction in mechanic arts points out the most promising trades and teaches them so as to meet the needs of the State; instruction in commerce relates to the undeveloped resources and the present commercial conditions of the State and investigates the principles and methods to be applied in the commercial growth of Utah; instruction in home economics teaches the women right living and economic independence.

The dominating spirit of the Agricultural College of Utah is to make the common work of the world—the work that most men and women must do—both profitable and pleasant. The motto of the College is, Labor is Life.

HISTORY

The Agricultural College of Utah was founded March 8th, 1888, when the Legislative Assembly accepted the terms of the national law passed by Congress on July 2nd, 1862. Under this Act of Congress, and the Enabling Act providing for the admission of Utah to the Union, 20,000 acres of land were granted to the State from the sale of which there should be established a perpetual fund, the interest to be used in maintaining the College.

Under the Hatch Act, approved in 1887, the State receives $15,000 annually for the Experiment Station. Under the Adams Act, of 1906 the State receives an additional $15,000 annually for research work by the Experiment Station. Under the Morrill Act of 1890, amended by the Nelson Act of 1907, the State receives $50,000 annually for instruction at the Agricultural College. Under the Lever Act, the State received, in 1917-18, about $15,000, which will increase for four years, for agricultural extension work to be done by the Agricultural College.

These federal appropriations, together with the annual income from the land-grant fund, represent the income received from the general government. Since most of these funds must be used in accordance with the law for specific purposes, the institution is dependent on State appropriations for funds with which to provide additional instruction and for general maintenance. These needs have been generously met in the past by the Legislative Assemblies of the State. In 1888 the sum of $15,000 was appropriated for buildings and the county of Cache and the city of Logan gave one hundred acres of land on which to build the College. Since that time the State has, from time to time, appropriated sufficient funds to erect and maintain all the buildings described in a later section, besides providing largely for instruction, experimentation and extension work.

By legislative action, the College receives annually 28.34 *per cent.* of 28 *per cent.* of the total tax revenue of the State, after deducting the revenue from 2.4 mills on the total State valuation (which is not to be exceeded), set aside for the support of the elementary and the high schools. In the same ratio the

College will participate in the revenue from the recent occupation tax. The State, moreover, provides $10,000 annually for extension purposes, $15,000 for experimental work and an increasing fund for farm and home demonstrations.

In September, 1890, the Institution was opened for the admission of students. Degree courses were offered in agriculture, domestic arts, civil engineering, mechanic arts and commerce; a preparatory course and short courses in agriculture and engineering were also given. Since that time many improvements have been made in the courses; some have been abandoned; various special, practical, year and winter courses in agriculture, commerce, mechanic arts and home economics have been added; the standard of the college work has been raised. In 1903 the Board of Trustees established the School of Home Economics, the School of Mechanic Arts, the School of Commerce and Business Administration and the School of General Science, and in 1911 the School of Agricultural Engineering.

In 1913, the Branch Normal School at Cedar City was made a branch of the Agricultural College and is so maintained.

In December, 1918, the Board of Trustees authorized the establishment of an Agricultural Engineering Experiment Station to include the departments of irrigation and drainage, roads, farm machinery and transportation, manufacture of agricultural products, rural architecture and buildings, and rural sanitation and public health. The Utah Agricultural College is the first such institution in the United States to establish an agricultural engineering experiment station as a distinct division.

Since 1917, the Institution has consistently aided the Federal Government in war and post-war programs. During 1917-18, the College trained 492 young men in its Reserve Officers' Training Corps. Six hundred eighty soldier mechanics were trained at the Institution during the summer of 1918. With the establishment at the College in the fall of 1918 of a unit of the Students' Army Training Corps, seven hundred twenty-four men were given collegiate and vocational military training. A large percentage of former U. A. C. students who saw service were commissioned.

The College gave valuable instruction in problems of increased production and consumption through its class room work. Twenty-five years of untiring experimentation showed excellent results when applied by Experiment Station specialists to concrete problems of production. The value to the State of the war service of the Extension Division was conservatively estimated at $4,738,027.00.

GOVERNMENT

The government of the College is vested primarily in the Board of Trustees and, under their control, in the four other administrative bodies,—the Deans' and Directors' Council, the College Council, the College Faculty and the Staff of the Experiment Station. These, in their several capacities, determine the policy and maintain the efficiency of the institution.

The Board of Trustees consists of thirteen members. Twelve are appointed by the Governor with the approval of the State Senate; the thirteenth is the Secretary of State who is *ex-officio* a member. This Board assumes the legal responsibility of the institution, cares for its general interests and directs its course by the enactment of all necessary by-laws and regulations. Vested in it is the power to establish professorships, to employ the instructing force and other officers of the College and to formulate the general policy of the institution.

Between sessions, the power of the trustees rests with an executive committee, whose actions are referred to the Board for approval. In addition, there are committees, largely advisory, that deal with the general interests of the College.

The Deans' and Directors' Council consists of the President, the Deans of the various schools,—Agriculture, Home Economics, Agricultural Engineering, Commerce and Business Administration, Mechanic Arts and General Science—the Dean of the Faculty, the Director of the Summer Quarter, the Director of the Experiment Station and the Director of the Extension Division: This body has immediate supervision of instruction and discipline in all the various schools. It constitutes a permanent executive and administrative committee of the College Council and Faculty.

THE COLLEGE COUNCIL Consists of the President of the College and all members of the faculty holding the rank of professor, the associate professors, the assistant professors, ranking professors, the instructors and the assistants. As an administrative body it is concerned with the ordinary questions of methods and discipline and with various other matters pertaining to the general welfare of the College. Through its standing committees it is in intimate contact with the student body and with the life and interests of the college community.

THE STANDING COMMITTEES have delegated to them the immediate direction of all the phases of college life. The conduct of the student in his college home and his regularity in performing college duties; the publications of the College and of the students; the interests of the students on the athletic field, in the amusement halls and in their various organiaztions,—all are within the province of appropriate committees.

THE EXPERIMENT STATION STAFF consists of the President of the College, the Director of the Station and the heads, with their assistants, of the departments of the Station. This body is employed in the investigation of problems peculiar to agriculture in this part of the country. It is further responsible for the circulation through private correspondence and regular bulletins, of such information as is of practical value to the farming communities.

THE STUDENTS. The College is maintained at public expense for public good. The students, therefore, are under a peculiar obligation to perform faithfully all their duties to the State, the Institution and the community. Most important of these is an active interest in all that concerns the moral and intellectual welfare of the College. Regularity of attendance, faithful attention to studies and exemplary personal conduct are insisted upon at all times by the administrative bodies of the College.

ADMISSION AND GRADUATION

ADMISSION. Entrance to the freshman class is based upon a certificate of graduation from an accredited high school, or upon the presenting of 15 approved high school units of work, or upon examination, in case of students of special training not obtained in high school. High school graduates are strongly urged to send their diplomas or a record of their credits to the Registrar at least two weeks before the opening of school.

A high school unit is equivalent to four preparatory credits that are one hour in length and extend over a period of 36 weeks or to five that are forty-five minutes in length and extend over the same period of time.

A student may be ranked as a conditional Freshman provided he is deficient in not more than one and one-half units of high school work. This deficiency must be removed, however, before the student is admitted to Junior standing.

Students who have more than one and one-half units of high school deficiency can not enter unless they are 18 years of age, in which case they must register in the vocational courses (See page79).

ADVANCED STANDING. Advanced standing for college work taken after completion of four years of high school may be granted at any time by the Committee on Advanced Standing provided the student presents satisfactory evidence that the work offered is equivalent to the work for which he wishes to substitute it.

Advanced Senior College standing for junior college credits in excess of ninety quarter hours may be allowed at the time the student is given senior class standing provided:

(a) That no subject be transferred with a grade lower than "B";

(b) That not to exceed twelve quarter hours above the ninety be transferred;

(c) That not more than six hours of work below "B" in grade be done at the Utah Agricultural College during the Junior year; and

(d) That the approval of the department or departments concerned in the transfer be obtained.

College credit for teaching experience may be given provided:

(a) That the applicant is a student or a graduate of this institution and desires to use the credit toward a degree here.

(b) That satisfactory evidence of successful teaching experience be furnished by the applicant.

(c) That the application have the approval of the head of the department of education.

(d) That the amount of such credit be based partly upon the degree of success and partly upon the length of service of the applicant, but shall in no case exceed the amount allowed for apprentice-teaching in this institution.

CLASS STANDING. Students are ranked as Freshmen, Sophomores, Juniors and Seniors at the time they enter and this rank, when once fixed, is not changed during the school year.

Thirty-six hours (36) of approved college work, in addition to the prescribed entrance requirements, are required for

Sophomore rank; eighty-one hours for Junior rank (see pages 41-43) and one hundred thirty hours for senior rank. The foregoing requirements are to be exclusive of the required courses in Physical Education and Drill.

Admission To Vocational Courses. Only persons 18 years or over are admitted to the vocational courses. No examination is required for admission to these courses.

To graduate from any of the schools, or to obtain class standing, special students not having the prescribed entrance requirements must satisfy a committee, by special examination, of their ability to pass the entrance requirements. This committee shall consist of the committee on entrance, the professor of English and two members of the faculty from the school in which the student wants to do his major work. Application for the examination, which must be taken not later than the beginning of the Junior year, may be made to the Registrar the first of the last week of any quarter.

Students without college standing may obtain conditional standing upon passing the Thorndyke Intelligence Test, with a grade of 60 or above. Such conditional standing may be changed to full standing upon the completion of a year of work of the grade of "B" or better.

Registration. The fall quarter opens Monday, September 25; the winter quarter, Tuesday, January 2; and the spring quarter, Monday, March 19. It is of decided advantage to register upon the opening date. The amount of work for which any student will be allowed to register will be reduced by one and one-half credit hours for each week or fraction thereof that the student is late in registration.

Fifteen hours, exclusive of Physical Education and Drill, is the normal registration for any one term. A student may, however, with the consent of the school director, register for seventeen hours.

QUARTER HOURS. A quarter hour of credit is the credit given for one hour of lecture or three hours of laboratory work each week for twelve weeks. This is the basis upon which credits are now calculated at the College.

SEMESTER HOURS. Semester hours of credit were employed at the College previous to September 1, 1918. A semester hour is the same as a quarter hour, except that the period is eighteen weeks.

Semester hours may be converted into quarter hours by multiplying by one and one-half.

JUNIOR AND SENIOR COLLEGE COURSES

The collegiate work of the institution is divided into two divisions: Junior College courses and Senior College courses:

JUNIOR COLLEGE COURSES. Any student who has met the entrance requirements imposed upon the Freshman class may pursue any of the Junior College courses provided he has had the necessary prerequisites.

SENIOR COLLEGE COURSES. Any student wishing to pursue Senior College courses in any subject must first obtain full Junior class standing and have completed the Junior College requirements in that subject, provided that any student having the necessary qualifications may pursue a Senior College course after receiving the permission of the instructor of the course and the dean of the school in which he is registered. All college courses taken before the student has accumulated eighty-one hours of college credit will be considered by the committee on graduation as Junior College courses, even though they be listed as Senior College courses.

JUNIOR CLASS STANDING. To obtain Junior class standing a student must have completely satisfied the entrance requirements. He must have satisfied all of the Junior College requirements in Physical Education and Drill and, in addition, present eighty-one hours of Junior College work which shall include forty-eight hours of the work in the required groups. (See pages 75 and following.)

Graduation. The degree of Bachelor of Science in Agriculture, Home Economics, Agricultural Engineering, Commerce, Mechanic Arts or General Science, is conferred upon those who present 15 units of high school work and full Junior class standing, together with 54 hours of work from the Senior College and sufficient work from either college to make the total number of hours presented equal to 180 exclusive of the required courses in Physical Education and Drill. (See pages 199 and 208.) The candidate for the bachelor's degree in Agricutlure must also pass an examination at the beginning of his senior year in farm practice to be given by the head of the department in which the student is majoring, the director of the School of Agriculture and one other to be selected by these two. A student who has been excused from Physical Education or Drill for physical disability or other valid reason must present an equivalent amount of other work for graduation. The student must meet all of the general requirements of the College (see pages 50-53) and all of the group requirements of the school from which he wishes to graduate. (See pages 75 and following.)

Other Requirements For Graduation. The student must have been in attendance at least one school year preceding the conferring of the degree. This residence period must include his senior year, unless specific arrangements to the contrary have been made. He must have no grade lower than "D" in any subject used for graduation. Four-fifths of his quarter grades must be "C" or better. He must be of good moral character. He must have discharged all college fees. He must be recommended for graduation by the faculty of the school in which he is doing his major work and must receive the favorable vote of two-thirds of the members of the College Council. Unless he secures an excuse in writing from the Committee on Graduation, he must be present in person at the commencement exercises at which he secures his degree.

No student may be recommended to the College Council for graduation as long as he has any deficient grades in any subject used toward graduation. Students who expect to graduate at the June commencement must have their work in shape for presentation to the College Council at least 60 days before commencement.

GRADUATION AT THE CLOSE OF THE SUMMER QUARTER. Any student who can satisfy the requirements for graduation by the close of the Summer Quarter may be presented to the College Council in May. Such students are listed with the class of the following year and receive their public graduation at the following Commencement. The graduation of such students, however, will be certified to by the proper authorities of the College as soon as their work is completed, *provided* it is completed before September 15 of the year in which they are passed upon for graduation.

The College Council is the only body that has the authority to waive or abridge in any way the foregoing requirements for graduation.

REQUIREMENTS FOR ADVANCED DEGREES

Registration of all graduate students shall be made by the chairman of the committee on graduate work.

THE MASTER'S DEGREE

The degree of Master of Science may be granted on the completion of the following requirements:

The candidate must have been in actual residence at the College at least three full quarters after receiving the standard Bachelor's degree (or after having met the requirements for this degree), and must obtain fifty-one (51) credits for work in addition to the 180 College credits and 15 High School units, or their equivalent, required for the Bachelor's degree.

Attendance at three consecutive full summer quarters will be considered as one year in residence in satisfying the residence requirements for the Master's degree.

To be admitted to the candidacy for the Masters' degree the student must have his course of study approved by November 1, or at least seven months preceding the date on which he expects to receive the degree, by the committee on graduate work, the professor in charge of his major subject and the dean of the school in which his major subject is taken.

A thesis covering the work done in the major department must be prepared by May 1 and must be accepted by the group which approved his candidacy. At least two copies of the thesis must be filed with the college librarian.

The candidate must successfully pass an oral examination, which will be given under the direction of the committee on graduate work, by the professor in charge of his major subject, the dean of the school in which his major work is taken and three professors to be selected by the committee on graduate work.

THE DOCTOR'S DEGREE

The degree of Doctor of Philosophy may be granted within certain departments of the College on the completion of the following requirements:

The candidate must have been in actual residence at a standard college or university at least three school years equivalent to nine quarters after having obtained a standard bachelor's degree, residence while an instructor not included. At least one of these years of residence must be at the Utah Agricultural College.

The candidate must satisfy the requirements of a major and two minor departments, these departments to be selected by the candidate with the approval of the Committee on Graduate Work from such departments and only such as are approved by the College Council and are equipped to give this type of work.

A thesis covering work done in the major department representing a high grade of research must be completed by May of the year of graduation and must be accepted by the three instructors in charge of the candidate's major and minor work together with the Committee on Graduate Work. At least fifty copies of the thesis must be filed with the college librarian.

The candidate must satisfy the Department of Modern Languages that he has a reading knowledge of at least two foreign languages by November 1, previous to the commencement in which the degree is to be conferred.

The final requirements for graduation must be approved by the College Council by November 1, previous to the commencement at which the degree is to be conferred.

The candidate must successfullly pass a public, oral examination which will be given under the direction of the Committee on Graduate Work by the three professors in charge of his major and minor work together with such heads of departments of related subjects as may be determined by the professors in charge of the major and minor work.

ORGANIZATION

The work of the College falls into three distinct divisions: first, the Experimental Division, having for its object the discovery of new truth or the new application of established truth, for the advancement of life; second, the College Proper, giving instruction, especially to young people, on the home campus of the College; third, the Extension Division, which carries instruction to the people who can not come to the College campus.

To accomplish this work the following administrative divisions exist, each of which draws upon the departments for its instructional or experimental force:

I Experimentation.
  1. The Agricultural Experiment Station.
  2. The Agricultural Engineering Experiment Station.
II. Instruction on the College Campus—the College Proper.
  3. The School of Agriculture.
  4. The School of Home Economics.
  5. The School of Agricultural Engineering.
  6. The School of Mechanic Arts.
  7. The School of Commerce and Business Administration.
  8. The School of General Science.
  9. The Summer Quarter.
III. Instruction beyond the College Campus.
  10. The Extension Division.

The instructional and investigational force and equipment necessary to carry out the work of the above divisions are organized into departments, of co-ordinate authority, each of which represents a somewhat definite field of knowledge. All officers of instruction or experimentation belong to one or another of these departments. One professor, designated head, carries the administrative responsibility of the department. At present, the College maintains forty-seven departments.

THE STUDENT BODY ORGANIZATION

The Student Body Organization embraces all the students of the institution. Its prime object is to foster a proper spirit of college loyalty and to give the students practice in managing public affairs. It also secures dispatch and efficiency, as well as uniformity, in the administration of all matters pertaining to the entire student body and induces all students to participate in college activities. The organization provides each member with a maximum of proper athletic, theatrical and social recreation at a minimum expense, viz., $12 annually. This society has control, under faculty direction, of the following student activities:

1. *Athletics,* including all inter-class and intercollegiate contests in football, baseball, basketball and track events. The Agricultural College is a member of the Rocky Mountain Conference, a fact which insures an interesting athletic program.

2. *Musicals,* including all public performances of the Band, the Orchestra and musical clubs.

3. *Theatricals.* In the past, *A Midsummer Night's Dream, She Stoops to Conquer, Pygmalion, Milestones, The Admirable Crichton, What Every Woman Knows* and various other productions, have been presented.

4. *Debating and Public Speaking.* Triangular debating arrangements have been made whereby, annually, the Agricultural College debates the University of Utah and the Brigham Young University on the same question. Interstate debates are also held. Those who make places on the teams not only win awards, but are admitted to membership in the Agora, an honorary debating fraternity. Debaters showing special excellence are admited to membership in Tau Kappa Alpha, a national honorary debating fraternity, a chapter of which is established at the College. Interest in inter-class debating is keen.

The annual oratorical contests for the Hendricks medal, for that given by The Sons of the American Revolution and for the chance to represent the College in the Inter-collegiate Peace contests, maintain among the students an active interest in extemporaneous public speaking. For dates of these contests, see college calendar, page 5.

5. *Student Publications.* The students of the College, under the direction of the faculty of English, publish a weekly school paper, *Student Life,* and the College year book, named *The Buzzer;* the Agricultural Club, the *Ag. Club Link.*

6. *Lyceum Course.* Each year the Student Body presents,

in connection with the B. Y. College, from six to eight lecturers, readers, or musical attractions, of national or local repute. These entertainments are free to members of the Student Body.

STUDENT CLUBS

Not affiliated with the Student Body organization, but standing largely for the interests of the various schools, are the following clubs:

The Agricultural Club, which aims to promote interest in scientific agriculture. The club has effected similar organizations in the high schools of the State. Special lectures, often illustrated, are given at intervals throughout the season.

The Agricultural Engineering Club, which aims to stimulate the interest of students in the more practical side of the work embraced by the engineering courses. Men of repute are invited to discuss questions before the club. It also aims to promote the interest of the students socially.

The Home Economics Club, which is composed of the students in domestic science and arts. The object of the club is to keep students in touch with movements in this field and to promote interest in home economics. Many home economic societies in the high schools of the State are affiliated with this organization.

The Commercial Club, working to promote the interests of the School of Commerce and Business Administration, to popularize the commercial courses and to consider matters of interest not encountered in routine work. The club maintains an annual lecture course, given by prominent men of the State, on topics of special interest to the business man. All commercial students are eligible to membership.

The Mechanic Arts Association, designed to promote the social and intellectual interests of its members. All the teachers and all the regularly enrolled students of mechanic arts are eligible to membership. Monthly meetings are held throughout the year at some of which lectures are given by specialists.

Gamma Sigma Delta, a chapter of the national honorary fraternity for students in agriculture. Members are chosen for scholarship from the upper two-fifths of the junior and senior classes in agriculture.

Phi Kappa Phi, a chapter of the national honorary scholarship fraternity.

Tau Kappa Alpha, a chapter of the national honorary debating fraternity.

Scabbard and Blade, a company of the national, honorary, military fraternity of the same name, organized to perpetuate American ideals among young men and open to students who have shown particular excellence in their R. O. T. C. work.

Alpha Kappa Psi, a national fraternity, devoted to the interests of commerce and business.

The Agora, a local organization open to men from the intercollegiate debating teams. Its purpose is to foster debating in the College and to keep alive among the old debaters an interest in such contests. Students may become members of both Tau Kappa Alpha and The Agora.

The Chemistry Club, organized to promote interest in chemistry.

The *Be-No Club,* organized to foster scholarship, fellowship and loyalty.

The Benedicts' Club, designed to promote the social welfare of married students and to lower their expenses by co-operative buying.

The Periwig Club, composed of students prominent in dramatics. This club produces annually several plays.

The Booklovers' Club, organized for the study of subjects related to English literature but not usually treated in the classroom.

The Quill Club, an organization of writers.

The Camera Club, a group of students interested in artistic photography.

The Cosmos Club, oganized for the study of present day problems; open only to men.

The Tennis Club, organized to promote interest in tennis and develop players for intercollegiate matches.

The Empyrean Club, organized for the study of current problems; open only to women.

Le Cercle Francais, maintained by students in French for practice in speaking the language.

The Cosmopolitan Club, composed of students who have lived in other countries than the United States.

Beaux Arts Guild, designed to encourage interest in the various phases of Art by lectures and informal social meetings.

Alpha Sigma Nu, a senior honorary society. Membership is maintained by elections from the Junior class held each spring.

Kappa Omricon Kappa, an honorary, professional home economics sorority, designed to encourage interest in home economics.

Various other clubs, as well as a number of fraternities and sororities, are also in successful operation.

STUDENT EXPENSES

Tuition is free. Utah students pay an annual entrance fee of $25.00; students from other states pay $50.00. By State law, however, the Institution may relieve worthy and deserving students from payment of the entrance fee, provided that not more than ten per cent of the total student body be relieved of this fee in any one year. A uniform laboratory and library fee of $5.00 for the school year, a gymnasium fee of $1.00 for each quarter, a medical fee of $2.00 for each quarter and a withdrawal deposit of $1.00, are charged every student.

According to the constitution of the Student Body, every regular student must pay, in advance, a Student Body fee of $12.00 if registered for three quarters, of $9.00 if registered for two quarters, and of $6.00 if registered for one quarter, for which a membership card is issued admiting him to all the activities controlled by the Student Body organization: athletic events—football, baseball, basketball, and track—dramatic and musical entertainments, socials, lectures, etc., and, in addition, giving him a copy of the annual year book and subscription to the college paper. This system has been found to be a great saving to the students and a most excellent means of fostering proper interest in student activities.

The Utah Agricultural College has been designated by law as an institution where units of the Reserve Officers' Training Corps are maintained. As such it has promised the Government to give certain military instruction of a definite kind and character.

Every physically fit male student who registers at the College becomes automaticallly a member of the Reserve Officers' Training Corps and subscribes to the military requirements of the institution.

In order to remain and receive instruction at the College or to graduate finally from the College, the student must be in attendance at all military classes and do satisfactory work in them.

The student, by registration at the Institution, obligates himself to conform to such requirements as are or may be prescribed by the College Council under the regulations of the Reserve Officers' Training Corps. These requirements, at present, are as follows: Two years of required military training, followed by two years of optional military training. Free uniforms are furnished by the War department to those taking the required work. Those taking the last two years receive, in addition to free uniforms, commutation of subsistence. The requirements will vary slightly according to the military units in which the student registers. During the year 1922-23, the units to be maintained at the College include Coast Artillery and Motor Transport.

All women students who are physically fit must take Physical Education during the first two years of their college work at the Institution, or until they have satisfactorily completed Physical Education 13, 14, 15, 16, 17, 18 or their equivalents. All vocational women students must register in Physical Education 10, 11, 12.

Each student taking Physical Education must provide herself with gymnasium suits and gymnasium shoes. The cost is about $6.00.

Each student in Foods and Dietetics courses and Household Administration 150 must provide herself with the following: two hair nets, one or two white petticoats, two washable white uniforms, two white work aprons.

Each student in Home Nursing course must provide herself with the following: one or two white petticoats, two washable white uniforms.

The uniforms required for Home Nursing course, and aprons and uniforms required for Foods course and Household Administration 150, must be of the standard designs provided by the Textile and Clothing Departmnet.

Materials should be procured after consultation with the instructors in charge.

All graduates from the School of Home Economics who desire to qualify as teachers in home economics under the Smith-Hughes Act must spend the required period of residence in the Home Economics Cottage, as indicated in Household Administration 150.

The fee charged for a diploma of graduation is $5.00.

Good board and room in a private home costs from $6 to $7.50 a week. By renting rooms and boarding themselves, students are able to reduce considerably the cost of room and board.

The College maintains a modern, well equipped cafeteria, where students may eat at cost.

The following table furnishes an estimate of the actual yearly expenses of students attending the Utah Agricultural College:

	Low	Average	Liberal
Tuition, books, fees, etc.	$ 65	$ 65	$ 65
Room and Board	200	225	270
Incidentals or miscellaneous	40	80	135
Total	$305	$370	$470

Students are held responsible for any injury done by them to the College property.

The Senior Loan Fund, a gift of the class of 1911, and added to by the class of 1922, has helped many students through school.

The Johansen Scholarship Fund of $5,000, a gift of the late Mrs. Johanna Johansen, provides three scholarships annually, each worth approximately $120, for the help of worthy students of Junior or Senior rank. Applications for this scholarship must be filed with the chairman of the committee on honors and awards before April 15 for the succeeding year.

SCHOLARSHIPS AND AWARDS

The One Thousand Dollar Liberty Bond Endowment yields a loan fund of $40, which is to be loaned by the Directors' Council to a student who has made formal application before April 2, and who has need of financial help and who has demonstrated a high degree of scholarship in the work of previous quarters.

The U. A. C. Faculty Women's League endows the Institution with a fund of $50, to be given annually as a scholarship to a worthy and deserving student of the School of Home Economics.

The Citizenship Award, a medal given by President Elmer G. Peterson, is awarded annually to the male student who shows evidence of being able to repay, in greatest measure, to the Nation and the State the investment which they have made in him. The United States in return for the opportunities which it freely offers to all its youth, irrespective of conditions or race, wealth or social position, cherishes the faith that there will arise a noble and enlightened citizenship that will exalt and perfect the ideals of government and of industry. Such is the prime motive of education.

The basis of the award is as follows:

(a) The potential vocational or professional efficiency of the student as shown by his scholarlyy attainment, his industry, and natural adaptability and talent. 40 points.

(b) His patriotism, honesty and good judgment as a student citizen, as an indication of his future attitude as a voter or public servant, combining a progressive spirit with a love and concern for the safety of American institutions of liberty and justice. 40 points.

(c) His qualities of social leadership, as shown in student affairs, based upon physical and moral cleanliness and strength. 10 points.

(d) His ability to serve his country in times of emergency. 10 points.

The R. O. T. C. Medal, a gift of President Elmer G. Peterson, is awarded each year to the student in Military Science and Tactics who most nearly represents the ideal that the Reserve Officers' Training Corps is striving to develop, upon the following basis:

(a) Character, 20 points.
(b) Scholarship, 15 points.
(c) College Activity, 15 points.
(d) Leadership, 20 points.
(e) Aptitude for and interest in Military Science, 20 points.
(f) Physique and bearing, 10 points.

The Rhodes Scholarships. Special attention is called to the Rhodes Scholarships in Oxford University, England, to which one appointment from the State of Utah will be made for 1923. The scholarships are each of the value of approximately $1,500.00 a year, and are tenable for three years. Full information and application blanks may be secured at the President's office.

The Hendricks Medal, a gift of Mrs. Carrie M. Hendricks, n memory of the late Professor George B. Hendricks, is awarded yearly to the student who delivers the best extemporaneous speech.

The Sons of the American Revolution award a medal annually for the best patriotic speech.

The Casto Medal, a gift of Mr. George D. Casto, is presented annually for the best memorized speech.

The Vernon Medal, a gift of Dr. Weston Vernon, is given each year for the best short story written around western characters and with a western setting.

The Howell Medal, a gift of Howell Brothers, is given annually to the best inter-collegiate debater.

The Men's Shop Medals, a gift of The Men's Shop, are given annually to the members of the championship inter-class debating team.

The Utah Agricultural College Science Medal, a gift of Proessor William Peterson, is given each year to the student writng the best review of recent scientific research in either mathmatics, physics, chemistry, geology, zoology, botany or astronmy.

A Loving Cup, for scholarship, the gift of Dr. W. L. Wanlass, is presented each year to the social fraternity showing the highest scholarship. This cup will become the property of the first fraternity to win it three times.

Scholarship A's are given at the close of each year to the six highest ranking students.

A list of the recipients of various honors will be found at the back of the catalog.

Several further awards are given for athletic and other student-body activities.

BUILDINGS AND EQUIPMENT

The College now has nearly thirty buildings, all modern, well lighted and heated and all carefully planned.

THE MAIN BUILDING is 360 feet long, 200 feet deep in the central part and four stories high. It contains the large auditorium, seating about 1,500, the administrative offices, the library and many class rooms and laboratories.

THE HOME ECONOMICS BUILDING is one of the largest and best equipped structures devoted entirely to domestic science and arts in the inter-mountain region.

THE THOMAS SMART GYMNASIUM is one of the finest and most complete college gymnasiums in the Rocky Mountain region. It contains a main exercise hall, 114 by 70 feet, the equipment of which can be quickly put in place or hoisted out of the way to suit any need. Ten feet above the main floor is a running-track, a hand-ball court and a wrestling and boxing room. The large pool, shower and steam baths and dressing rooms with steel lockers are ideal.

THE EXPERIMENT STATION is a two-story brick structure 45 feet long and 35 feet wide, containing the offices of the station staff, a reading room and a dark room for photography.

THE MECHANIC ARTS BUILDING, a two-story brick structure, has a floor area of 40,000 square feet and contains the wood-working department, machine shops, forging rooms, foundry, carriage building rooms, mechanic arts museum, drafting rooms, blue-printing room, room for painting and staining and class rooms,—all well equipped.

THE CHEMISTRY BUILDING, containing three stories, thoroughly modern in plan and equipment, is occupied by the Departments of Chemistry, Physics and Bacteriology.

THE LIVE-STOCK BUILDING of three stories is exceptionally well fitted with facilities for the study of dairying, hog, horse and sheep husbandry and range management.

THE AGRICULTURAL ENGINEERING BUILDING, an excellently arranged three story brick structure, houses the Departments of Irrigation and Drainage, Surveying, Hydraulics, Mechanical Drawing, Architecture, Household Sanitation, Farm Mechanics, including auto and tractor work and some related phases of the work of the Institution.

THE PLANT INDUSTRY BUILDING is a four story brick building, thoroughly modern in arrangement. It houses the departments of Agronomy, Botany and Plant Pathology and Horticulture.

THE BARNS contain the various breeds of cattle, horses, sheep and hogs most common in the western section.

THE HORSE BARN is the most modern structure of its kind hat can be built.

THE STOCK JUDGING PAVILION makes it possible to do tock judging in all kinds of weather.

THE POULTRY YARDS are equipped with various types of uildings to accommodate about one thousand fowls, a brooder ouse with a capacity of 2,500 chicks and a modern incubator ellar with standard incubators of several makes and designs. The laboratory is well supplied with different styles and sizes f incubators, brooders, food hoppers, etc., suited to use in study f the management of large and small flocks.

The Greenhouses are prepared for laboratory instruction in the propagation of horticultural plants and in the practice of floriculture and vegetable gardening.

The Veterinary Hospital contains a well-equipped dispensary, operating room and stalls for patients.

The Seed House is designed as a store house for the seeds of the Department of Agronomy.

The Heating Plant, in order to take care of the many new buildings on the College Campus, has been doubled in size and will insure properly heated laboratories and class rooms

EQUIPMENT

The Bacteriological Laboratory is well equipped with modern apparatus. To encourage careful work, the students are provided with individual lockers.

The Chemical Laboratories are modern and thoroughl equipped.

The Physical Laboratory Equipment is complete, consistin of all the necessary apparatus for class demonstration. Gas compressed air, continuous and alternating current electrica power, etc., are available.

The Physiological Laboratory is supplied with an excellen collection of native animals, skeletons, both articulated and disarticulated, many enlarged models of organs, a *papier mach* manikin and complete slides of all the tissues.

The Zoological and Entomological Laboratory is equippe with water and gas, improved instruments, embryological model skeletons from the vertebrate groups, collections of mounte birds, mammals, reptiles, fishes and insects.

The Botanical and Plant Pathological Laboratory is we equipped for general work as well as for research. The depar ment maintains a good working library in connection with th laboratory.

The Department of Agronomy is provided with a large collection of agricultural plants, seeds and soils, representing the main crops and types of soil of the inter-mountain region.

The College farms are equipped with the best and latest implements and machinery for carrying on work scientifically. They are divided, for illustrative and experimental purposes, into numerous plats on which many varieties of farm crops are grown and upon which important experiments are carried on.

The soil physics laboratory has a good supply of apparatus for accurate and up-to-date work.

The farm crops laboratory, equipped with gas, has a large supply of farm crops on hand and is well supplied with ap-paratus.

The Commercial Rooms, occupying the entire third floor of he front of the Main building, are specially designed and furished for business. The room for typewriting contains a full omplement of standard machines.

The College Museum contains many specimens illustrative f geology, mineralogy, paleontology and vertebrate and inverterate zoology, including a large series of plants of the western ountain region and an extensive series of plants of the western ighlands. An extensive collection of grains represents the prouce of Utah and other states. Contributions of fossils, ores, imals, plants, relics or other material of value to the museum, e appreciated. All gifts are labeled and preserved and the ame of the donor is recorded.

The Art Rooms, composed of six studios, are supplied with ain and adjustable tables, easels and model stands, individual ckers, cases for materials, casts from the old masters in sculpre, reproductions of great paintings, still-life models and drapies, as well as with a valuable collection of ceramics, textiles d books on art.

The Library occupies the entire front of the second floor of the Main building. It is the laboratory for every course given at the College and contains 35,121 books and a large number of pamphlets. The books are classified by the Dewey decimal system and there is a complete dictionary card catalog. The shelf list, also on cards, forms a classified catalog for official use.

The library is also a depository for United States documents and for the Carnegie Institute. The files of the United States Department of Agriculture and publications of the Experiment Stations are nearly complete; the bulletins are bound and made easy of access by the printed card catalogs. There are one hundred and forty periodicals on the subscription lists, besides about one hundred which are received as exchanges for publications of the College and of the Experiment Station. Practically all the newspapers of the State are on file in the Reading Room. The Reading Room is beautifully furnished in oak and contains many oil paintings and pieces of statuary.

The land occupied by the College embraces about 142 acres. Of this, thirty-five acres constitute the campus, laid out with flower-beds, broad stretches of lawn, tennis courts, wide drives and walks.

Immediately east of the Main building is the quadrangle of about ten acres. The Adams athletic field is one-fourth mile west of the campus. The farms comprise 97 acres, the orchards and the small fruit and vegetable gardens, 10 acres.

In order to enlarge the experimental and instructional opportunities of the faculty and students of the college, the State Legislature of 1919 authorized the expenditure of $25,000 to purchase additional farm land.

Other farms are maintained, under the direction of the Experiment Station, in various parts of the State.

The equipment of the Branch Agricultural College is described in the circular of that institution.

THE EXPERIMENT STATION

The Agricultural Experiment Station is a division of the College, supported by Federal and State appropriations and supplemented by the receipts from the sale of farm products. The Station was created for the purpose of discovering new truths that may be applied in agriculture and for making new applications of well-established laws. Essentially devoted to research, it does the most advanced work of the College. It is composed of seventeen departments with a staff of over thirty highly trained specialists who are investigating over fifty distinct projects.

The Station is not, in the ordinary sense, an institution where model farming is carried on. It has a much higher purpose. The practices of the farmer are subjected to scientific tests in order to determine why one is bad and another good. Acting on the suggestions thus obtained, the scientists begin new investigations in the hope that truths of great value to the farmer may be discovered.

The Station confines its efforts as far as possible to the paricular problems of the inter-mountain region. Irrigation, the oundation of western agriculture, has received greatest attenion. Elaborate experimental plats have been equipped where he value of different quantities of water and methods of aplication have been studied and the underlying principles rought out.

Dry-farming problems are only second in importance to hose of irrigation in the development of the West. A number f experimental dry-farms are maintained on which every effort made to increase production. Many of the present investigaons involve water-holding capacity of soils, the water reuirements of crops, the movement of plant foods and other estions fundamental to all systems of agriculture.

Other problems vitally affecting the agriculture of the West are under investigation. Alkali, the big problem of all arid and semi-arid countries, is receiving considerable attention. Breeding experiments for the improvement of sugar beets, potatoes, cereals, alfalfa and poultry are in progress. Insect pests and plant diseases affecting western crops and orchards are under constant surveilance. The micro-organisms of the soil, which have recently been found to be an important factor in agriculture, are being studied. The development of better cropping methods, the dairy industry and the range lands of the State are receiving attention together with various livestock rations. Plant disease, horticultural and soil surveys are now in progress. Among the last projects to be started are human nutrition investigations and a study of the farm management problems of Utah.

Bulletins containing the results of experimental work and circulars containing timely and practical information on various subjects are issued at irregular intervals. These are mailed free of charge to all persons requesting them.

The Experiment Station has a high educational value. Nearly all the staff are also members of the College faculty; the students, therefore, receive at first hand an account of the methods and results of the work of the Station, as well as training in their application. The opportunities that the Station offers for advanced work in several branches of science are of great importance. The scientific method and spirit characterize all its operations and none can fail to be benefited by a study of the experiments that go on at all times of the year

The Station is always glad to assist advanced student in any investigation they wish to undertake.

THE AGRICULTURAL ENGINEERING EXPERIMENT STATION

The Board of Trustees established in 1918 an Agricultur

Engineering Experiment Station as a separate division of the work of the College. The organization of the agricultural engineering experiment station is a logical development of the work of the College following the organization in 1911 of the School of Agricultural Engineering. It will enable the college to use part of its funds, both federal and state, in the investigation of the many problems which confront the development of agriculture on the engineering side.

The profession of rural engineering is almost a realization. The farmer must, therefore, be advised fully in regard to engineering as it affects rural communities. That there was a direct need for this organization, is evidenced by the fact that much work which is properly a part of the work of such a station has been carried on informally by various departments of the college. The work of the Agricultural Engineering Experiment Station will continue in a more complete way the work which has thus already been undertaken informally and it will branch out ultimately to include all of those problems wherein the profession of engineering touches that of agriculture.

As organized at present, the Agricultural Engineering Experiment Station consists of the Department of Irrigation and Drainage, Roads, Farm Machinery and Transportation, Manufacture of Agricultural Products, Rural Architecture and Buildings and Rural Sanitation and Public Health. Complete programs of work have already been outlined in these different departments and comprehensive investigations are under way.

THE EXTENSION DIVISION

Organized for the purpose of disseminating the work of he College and the United States Department of Agriculture mong the people of the State and for the further purpose of eginning new work outside the College which may be of service to the people of the State, the Extension Division serves two purposes; it carries on organized instruction in the various subjects included in the College curriculum and it performs personal and community service of a more directly practical nature. The Extension Division is the joint representative in Utah of the United States Department of Agriculture and the Utah Agricultural College.

ADMINISTRATION

The Extension Division, in its administration, is divided into departments, as follows:

Administration
Specialists
County Agent Work
Home Demonstration Work
Junior Extension Work
Correspondence Study
Community Service Bureau

A corps of specialists is maintained at the College for the purpose of giving special aid to the Extension agents in the counties and otherwise promoting their special lines of work.

County Agricultural Agents are maintained in most of the counties of the State. Their chief work consists in developing and executing a program of agricultural improvement, in making necessary calls to individual farms, in supplying market quotations and in otherwise rendering service to the farmer.

County home agents are maintained in a number of counties and cities of the State. The purpose of this work is to develop and carry out a definite program of home improvement which is done by working through organizations and by individual calls as far as possible. This work is carried on through the home section of the farm bureaus.

County work is maintained for the purpose of supervising and assisting the boys and girls in carrying out definite farm an home projects. Under this plan the primary purpose is to develop leadership and train boys and girls in better methods o farm and home practice.

The Correspondence Study Department. The Utah Agricultural College was one of the first educational institutions in the inter-mountain region to establish such a department.

Correspondence study furnishes an excellent opportunity for systematic instruction to the student preparing for high school or college, the teacher, the professional or business man, the club woman, the project leader in extension work—to all who cannot leave home.

Admission to correspondence work. Students must be eighteen years of age or graduates of the public school.

Scope: Courses offered:

1. Academic studies which, under certain restrictions, count oward a degree.

2. Practical studies designed to advance men and women n a given occupation.

3. Reading Courses for the farmer: short, practical, non-redit courses in agronomy, animal husbandry, horticulture, arm machinery, bee-keeping, etc.

4. Reading Courses for the housewife: short, practical on-credit courses in sanitation, home management, cooking ervice, sewing, home decoration, home care of the sick, etc.

5. Reading Courses for the business man: short, practical on-credit courses in analysis of retail merchandising, retail ore accounting, bookkeeping for the wholesale grocer, bookeeping for co-operative grain elevators and creameries.

6. Preparatory or high school course.

7. Grade studies.

A special bulletin of the corresponding study department ill be mailed to any one interested.

The work of the Community Service Bureau, designed to elp Utah towns and villages in community celebrations, club ork and school life, includes (a) play service, (b) club service,

(c) community service, (d) debate service and (e) library service.

Publications of real value to the rural communities are issued in the form of circulars as occasions demand.

COLLEGE PROPER

For the purpose of efficient administration, the instruction on the campus or in the College proper is divided into seven schools: (1) The School of Agriculture; (2) The School of Home Economics; (3) The School of Agricultural Engineering (4) The School of Commerce and Business Administration (5) The School of Mechanic Arts; (6) The School of Genera Science; (7) The Summer Quarter.

The School of Agriculture offers a four-year college cours with opportunity to major in agronomy, animal husbandry, bacteriology, botany and plant pathology, chemistry, dairying, entomology, horticulture or veterinary science.

The School of Home Economics offers a four-year colleg course with the opportunity to major in foods and dietetics, household administration or textiles and clothing.

The School of Agricultural Engineering offers a four-year college course with the opportunity to major in art, agricultural surveying, farm mechanics, irrigation and drainage, roads rural architecture or rural sanitation.

The School of Commerce and Business Administratio offers a four-year college course with the opportunity to majo in acounting and business practice, agricultural economics, business administration, economics, history, marketing, politica science or sociology.

The School of Mechanic Arts offers, in addition to shorte trade courses, a four-year college course in mechanic arts, wit the opportunity to major in art, iron work, mechanical drawing, machine and automobile work, technology of mechanic arts and woodwork.

The School of General Science offers a four-year college course in general science.

The Summer Quarter offers instruction during twelve weeks of the summer, after the regular term has closed, in most of the subjects taught during the winter.

Each school also offers *practical year and winter courses* which may be taken by mature students fitted to follow them.

For *Work in Education*, see index.

THE SCHOOL OF AGRICULTURE

Agriculture is one of the most promising of modern pro-essions. It is growing very rapidly and, owing to the scien-ific foundation that recent years have given it, large numbers f intelligent people are adopting it as their means of livelihood. The new agriculture is not a profession of unceasing toil. On he contrary, the freedom, health, intellectual activity and profit o be obtained from intelligent farming are attracting the best lasses of people. Utah and other western states are offering ex-ellent opportunities to those who prepare themselves for scientific arming. There is a great demand for men who can supervise arge farm enterprises; there is a greater demand for men who an act as experts, experimenters or teachers in the schools and ther institutions in the State and National Government. The upply of such men does not equal the demand.

Experience having shown that practicaly all of the students ho take agriculture come from the farms, it is assumed that ey are acquainted with the various manual operations of farm ork. The design of the school is, therefore, to teach the iences that underlie practical agriculture and to offer sufficient pplementary studies to develop the agricultural student to the tellectual level of the educated in the other professions. The agricultural courses are planned to lay a foundation upon which the student can build a successful career as a farmer or develop into a specialist in agriculture. Before a degree will be granted in agriculture, the student must give evidence that he has spent at least one summer at farm work.

The general and departmental libraries enable the student to become acquainted with a wide range of agricultural and related literature; the laboratories of the College and the Experimen Station afford opportunity for training and experience not obtainable from books alone.

For subjects in which the student may major or minor se Required Work for Graduation.

THE SCHOOL OF HOME ECONOMICS

The steady growth of Home Economics courses in leading colleges and universities indicates the ever increasing realization that the well conducted home is the most important factor in the development of healthful and capable citizenship. Bu the multiplying complexities of modern life demand, further that those in charge of the family understand much that is beyond the exact lines of the home. Hence the stress laid on th study of childhood and adolescence, the causes underlying th high cost of living and the problems of social, industrial an civic life.

The State of Utah wisely introduced courses in home management when the college was organized and the support whic has been accorded to the works by the public shows the wisdo which prompted this provision.

Year by year increased facilities have become available fo the students in the School of Home Economics. The most r cent additions to its efficiency are the newly equipped Hom Nursing Laboratory, and opportunity for apprentice teachi in Home Economics in the Logan High School.

The technical work in this school is organized into three departments, each dealing with one of the three equally important and interrelated phases of Home Economics. These are the Departments of Food and Dietetics, Household Administration and Textiles and Clothing. The course as a whole includes certain foundational courses in science and art that are prerequisites to the technical work and the so-called cultural courses, which must be included both to make a true Home Economics Course and to meet the College graduation requirements. This combination is well designed to fit women for the following professions: (1) Home Keeping; (2) Teaching of Home Economics; (3) Home Economics Extension Work. It also prepares women to hold various positions in the social and industrial organizations; for instance, as sanitary inspectors, dietitians, health visitors and designers and household decorators.

The completion of the Home Economics course requires four years of College work and leads to the degree of Bachelor of Science.

The vocational courses in Home Economics are offered to women, who are unable to take the regular course and yet desire training in this work.

THE SCHOOL OF AGRICULTURAL ENGINEERING

The rural problem has many phases. An adequate and self-perpetuating country life cannot be made simply by teaching people how to raise grain and fruit and how to manage and improve livestock. The country might be filled with farmers well trained in these branches and still lack many of the elements necesary for a well-balanced and efficient rural community. Many problems having to do with the entire community rather than with the individual farmer must be solved by men with training for that kind of work rather than by those trained to produce crops and livestock on a single farm. Again, many questions on the individual farm have to do with construction rather than with production from the soil. These questions can be properly answered only by men with special training.

In the past, agricultural colleges have given their attention to the direct questions of farming, but now the entire rural problem must be met. The farm must be a desirable and healthful place to live. The buildings must be so arranged and constructed as to give the maximum of efficiency and comfort and at the same time have proper sanitary provision. The rural roads must be such that the farmer can move his crops with small expense and go to town with comfort and speed. The machinery of the farm must be so constructed and cared for that it will be reliable and work economically. The limited supply of irrigation water must be so used as to produce maximum returns. There must be factories to change the raw materials of the farm into high-priced finished products. All these necessities demand men trained for them.

To meet the demand, the College has organized a School of Agricultural Engineering designed to enable men to solve all but the most technical engineering problems of an entire rural community. The courses are very helpful to the farmer who does not wish to do the work of a trained engineer.

Students may major in art, agricultural surveying, farm mechanics, irrigation and drainage, farm and public roads, rural architecture and rural sanitation and public health. These courses all lead to the degree of Bachelor of Science.

THE SCHOOL OF COMMERCE AND BUSINESS ADMINISTRATION

The purpose of the School of Commerce and Business Administration is to give opportunity for a liberal education with special emphasis upon the commmercial and industrial phases of life. Persons who complete the commercial courses are prepared to assume leadership and responsibility in busness and in various industries and professions. In order to meet the growing demands and to keep pace with recent tendencies in business education, students may major in accounting and business practice, agricultural economics, business administration, economics, history, marketing, political science and sociology.

In addition to these college courses, vocational courses are offered.

For the professions of law and medicine, the commercial courses afford excellent preparation. Graduates are prepared for positions as teachers in commercial schools. The demand for qualified teachers is greater than the supply and many desirable positions as industrial managers are open to those who are qualified.

The European War created an intense demand for men trained in foreign service and foreign trade. The Federal Bureau of Education has requested all colleges of the country to offer courses in preparation for such service. Accordingly, the School of Commerce and Business Administration has outlined a four years' course designed to fit students for foreign trade and diplomatic service. Especial emphasis will be placed on our South American commerce.

THE SCHOOL OF MECHANIC ARTS

This school offers three-year trade courses in contracting and building, forging and carriage work and automobile repairing; a two-year trade course in painting and interior decoration; and a four-year college course leading to the degree of Bachelor of Science.

The information offered finds application in every industrial activity and is much demanded by the rapid growth in the mechanical and industrial pursuits. As more and more of the work of man is done by machinery and labor-saving devices, it is desirable to obtain information that will enable man to meet the new conditions intelligently. The many applications of electricity and gas power in the factory, shop, home and on the farm, and the advent of the automobile demand a knowledge of materials, tools, machines and processes.

The agricultural student can obtain in the School of Mechanic Arts just the information he needs to enable him to do the constructive work in farm buildings and the repair work necessary in operating machinery thereby making farm life more profitable and desirable. Those who intend to enter engineering will find no better preparation than that offered in the mechanic arts courses. In the shops a knowledge of the nature of materials, methods of construction and operation of machinery can be had better than elsewhere. The demand for manual training teachers is far in advance of the supply.

The drafting rooms give thorough work in the methods of making mechanical drawings and afford opportunity to specialize in the line of work the student is pursuing, such as architectural, carriage, machine and agricultural drawing.

Students may major in art, iron work, mechanical drawing, machine and automobile work, technology of mechanic arts and woodwork. Vocational courses are also offered.

All products of the shop are the property of the school, students being allowed to take away specimens of their work only by permission.

THE SCHOOL OF GENERAL SCIENCE

To carry out the work of the several technical schools of the College, an efficient instructing force and complete modern equipment have been provided in the natural and physical sciences, as well as in English, mathematics, history, language,, etc. This makes it possible to satisfy the growing demand for strong baccalaureate courses affording a broad general education in the earlier years and admitting of specialization later. Such courses constitute the work of the School of General Science and, parallelling the other degree courses of the College, lead to the degree of Bachelor of Science.

For subjects in which students may major or minor, see Requirements for Graduation.

EDUCATION

By act of the 1921 legislature the Utah Agricultural College is required to add education to its course of study. The purpose is to enable students to prepare for the teaching profession in the broad lines of work represented in the College curriculum. In answer to this demand of the State, courses have therefore been added in psychology and education.

While all eligible students may enter these courses, some of them are especially designed to prepare Smith-Hughes teachers in agriculture and home economics and others to prepare extension workers.

These courses will be especially inviting because of the great demand for people trained in these lines. The federal government and the various states now employ about 5,000 extension workers and there is always great demand for teachers of agriculture and home economics and of trades and industries. Those who graduate in this work will have good opportunities for employment on twelve-month contracts, while teachers in other lines usually have but nine-month contracts. This fact alone will draw large numbers to them.

To keep teachers of agriculture and of home economics and extension workers alive and growing and to give them incentive to aspire to positions of broader usefulness, graduate courses will be offered that will apply to the getting of higher degrees and that will prepare for extension work as county agricultural agents, county home demonstration agents, agricultural specialists, home economic specialists and state and federal leaders in these lines. Advanced work will likewise be offered to prepare progressive teachers for greater responsibilities in Smith-Hughes work.

Vocational credits in education will be granted by the College for work done by high school students who are regularly registered in the junior extension school conducted each year by the College, subject to the following provisions:

a. That vocational credit be granted only to students who are registered for the course and complete the prescribed work under the supervision of a representative of the College.

b. That the credit shall be based upon the work done, but that not to exceed 4 quarter hours of credit shall be given.

c. That any excess high school credit resulting from doing this work shall be covered by the regular catalog provisions relating to excess high school credits.

SUMMER QUARTER

The College maintains, as an integral part of its work, a summer session beginning early in June and continuing for twelve weeks, divided into two terms of six weeks each. Each department of the College is represented, the courses of instruction being arranged to meet the particular needs of summer students. For the benefit of teachers, numerous courses in education are provided by the Department of Education as part of the regular work of the College. Students desiring to make up conditions or prepare for advanced work are given all assistance possible. The entire equipment of the institution is available for the summer session and every care is taken to preserve the standard and the spirit of the College. No admission requirements are prescribed, but students in all departments are directed by instructors to those courses in which they may pursue work to the best advantage. Arrangements have been made with the State Board of Education to accept summer quarter credits in individual subjects in lieu of examination. An entrance fee of $10 is charged. Board and rooms can be secured throughout the city at the usual prices. The special summer quarter circular will be sent on request.

SCHEDULE OF WORK REQUIRED FOR GRADUATION

The student is advised to read carefully the requirements for admission and graduation on pages 38 to 43 inclusive. These are briefly summarized as follows:

A student must present 15 units of high school work for entrance, must complete all the required work in physical education and drill and, in addition, must present 180 quarter hours of college work before receiving his diploma. The student should carefully note that 54 hours of the required 180 hours of college work must be chosen from courses listed among the Senior College courses, and must be taken after the student has obtained eighty-one hours of college work. Juniors and Seniors should remember in registering that even though they may have taken Senior College work during their Freshman and Sophomore years, they will still be required to take an additional fifty-four hours of Senior Colege work during these last two years of their course.

Technical Division.

Major Subject .... 24 hours

Twenty-four hours forming a major subject must be chosen by the candidate in some one department. The student must consult with the professor in charge of his major subject and secure his approval of the proposed combination of courses. This should be done as early as possible and must be done not later than the beginning of the Senior Year.

Minor Subjects .... 18 hours

Eighteen hours forming the minor subjects must be chosen in some other department or departments of the same school.

General Division.

Biological Science Group	18 hours
Exact Science Group	18 hours
Language Group	24 hours
Social Science Group	18 hours
Special Group	18 hours

The special group is additional work in one or more of the above groups in the general division or in educational subjects, and will be designated by the School Director.

Electives .... 42 hours

These electives are entirely at the disposal of the student. The departments from which the major and minor subjects may be elected and the subjects included in the various groups of the General Division are listed below.

REQUIRED WORK.

Technical Division.

Major, 24 hours in one department.

Minors, 18 hours in some other department or departments of the same school.

SCHOOL OF AGRICULTURE.

Agronomy
Animal Husbandry
Art (minor only)
Bacteriology
Botany and Plant Pathology
Chemistry
Dairying
Entomology
Horticulture
Veterinary Science

SCHOOL OF AGRICULTURAL ENGINEERING.

Art
Agricultural Surveying
Farm Mechanics
Irrigation and Drainage
Roads
Rural Architecture
Rural Sanitation

SCHOOL OF COMMERCE AND BUSINESS ADMINISTRATION.

Accounting and Business
  Practice
Agricultural Economics
Art (minor only)
Business Administration
Economics
History
Marketing
Political Science
Sociology
Stenography (minor only)
Typewriting (minor only)

SCHOOL OF HOME ECONOMICS.

Art (minor only)
Household Administration
Music (minor only)
Foods and Dietetics
Textiles and Clothing

SCHOOL OF MECHANIC ARTS.

Automobile Work
Art
Iron Work
Mechanical Drawing
Machine Work
Technology of Mechanic Arts
Wood Work

SCHOOL OF GENERAL SCIENCE.

Advanced Military Science (minor only)
Art
Bacteriology
Botany
Chemistry
Education
English
Entomology
Foreign Languages
Geology
History
Library Work (minor only)
Mathematics
Music
Physics
Physiology
Zoology

The departments from which the general subjects may be elected are grouped as follows:

REQUIRED WORK.

General Division.

BIOLOGICAL SCIENCE GROUP (18 hours).

Bacteriology
Botany
Entomology
Physiology
Veterinary Science
Zoology

EXACT SCIENCE GROUP (18 hours).

Accounting
Chemistry
Geology
Mathematics
Physics
Surveying

LANGUAGE GROUP (24 hours).

English
French
German
Latin
Public Speaking
Spanish

SOCIAL SCIENCE GROUP (18 hours).

Agricultural Economics
Business Administration
Economics
History
Marketing
Political Science
Sociology

SPECIAL GROUP (18 hours).

ELECTIVES (42 hours).

VOCATIONAL COURSES.

Vocational courses in agriculture, home economics, mechanic arts and commerce and business administration have been added to the regular work of the school. In these, emphasis is given subject matter which can be put to immediate and practical application on the farm, in the shop, in business or in the home.

No scholastic prerequisites are required for entering the vocational courses except that the student must have acquired 13½ high school units or be over eighteen years of age.

For full description of the vocational courses see departments concerned. All courses letered "a," "b," "c," etc., are strictly vocational. Some of the elementary courses of college grade may be entered by vocational students, however, after consultation with the head of the department.

TRADE COURSES.

Three year courses, to prepare students for a trade, are given in the following lines of work: wood work, forging, machine and automobile work, and in interior decoration. Two year courses are given in the following lines of work: show card and sign writing, art metalry, china painting and fabric decoration.

Students wishing to prepare for a trade in any of the above lines should make arrangements with the heads of departments concerned. Upon completion of the work outlined and upon the approval of the College Council, they will receive a letter of recommendation stating their proficiency in the work.

Suggested Courses For Various Professions

HOME ECONOMICS

Suggested grouping of subject matter for four year course leading to Degree of Bachelor of Science in Home Economics.

	Quarter Credits		
Freshman Year:	I	II	III
Chemistry 1, 2, (Inorganic Chemistry)	5	5	
Botany 1			1
Physics 1, 2	3	3	
English 5 Elective	5		
English 10		3	3
Art 1, 2, 3	2	2	2
Textiles 10, 11, 12	2	2	2
House Ad. 10	1	1	1
Phy. Ed. 13, 14, 15	1	1	1

Sophomore Year:	I	11	III
Chemistry 21, 22 (Organic Chemistry)	4	4	
Bacteriology			5
Bact. III			5
Physiology or Physics	3	3	
Foods 20	4	4	4
Textiles 20	3	3	
Economics 1, 2, 3	3	3	3
Physical Ed. 16, 17 18	1	1	1

Junior and Senior Years.

All students must complete the group requirements for graduation (major subject 24 hours; minor 18 hours, to include work in both departments other than department in which major work is done; exact science 18 hours; biological science 18 hours; social science 18 hours; language 24 hours; special group chosen under direction of school director 18 hours), together with sufficient additional work to make a total of 180 hours exclusive of the required work in physical education.

All students wishing to qualify as teachers of Home Economics in Utah High Schools should, and under the Smith-Hughes Act must, include all of the work outlined above for the Freshman and Sophomore years and complete the requirements for graduation with a major in either Foods or Textiles. They must elect Household Administration 122 (Home Furnishing and Decoration), Household Administration 150 (Household Management), Household Administration 125 (Mothercraft and Child Welfare), Education 120, 121 and 122 (Special methods in Home Economics and apprentice Teaching), together with sufficient additional educational subjects to meet the Utah State Board of Education requirements (27) hours for the State High School certificate.

SUGGESTED COURSES IN COMMERCE AND BUSINESS ADMINISTRATION

The field of commerce or business is now so large that it is impossible for any person to become proficient in all of its branches. However the business world recognizes several well defined professions of vocations for which trained men and women are always in demand. It is the aim of the School of Commerce and Business Administration to give the student a thorough grounding in the fundamentals of economics and business and then to give him special training that will prepare him to enter one of these recognized business callings. The following schedules of courses have been carefully worked out to guide the student in preparing himself for the vocation he desires to follow. These courses are not prescribed but the student who follows them will find at the end of his college career that he has a broad and thorough training. Furthermore, the student who enters college, selects the work he desires to do in life and prepares himself definitely for it has a great advantage over the student who goes through college without any definite objective.

SUGGESTED GENERAL FRESHMAN AND SOPHOMORE COURSE

	Quarter Credits		
Freshman Year:	I	II	III
English 10, Sec. 1	3	3	3
Economics 1, 2, 3	3	3	3
Accounting 1, 2, 3	4	4	4
History or Political Science 1, 2, 3	3	3	3
Exact Science Group	3	3	3

	Quarter Credits		
Sophomore Year:	I	II	III
Bus. Ad. 1, 2, 3 or Acct. 31, Office Mgt. 20, Acct. 21	3	3	3
Econ. 10, 30, 31 or Pol. Sci. 1, 2, 3 or History	3	3	3
Language Group	3	3	3
Math. 60, 61 and Bus. Ad. 112 or Exact Science Group	3	3	3
Biology Group	3	3	3

SUGGESTED SPECIALIZED COURSE IN ACCOUNTING

	Quarter Credits		
Junior Year.	I	II	III
Acct. 101, 102, 103	3	3	3
Mkt. 101, 102, 103 or Bus. Ad. 104, Econ. 167, Econ. 160	3	3	3
Bus. Ad. 101, Mkt. 131, 132 or Mkt. 121, Econ. 150 or Pol. Sci. 104, 105 and Acct. 151	3	3	3
Language Group	3	3	3
Biology Group	3	3	3

	Quarter Credits		
Senior Year:	I	II	III
Acct. 121, 131, 132	3	3	3
Pol. Sci. 104, 105, Bus. Ad. 113	3	3	3
Soc. 101, 150, 160	3	3	3
Bus. Ad. 107			3
Language Group	3	3	3
Elective	3	3	

SUGGESTED SPECIALIZED COURSE IN BANKING

	Quarter Credits		
Junior Year:	I	II	III
Mkt. 101, 102, 103	3	3	3
Mkt. 111, 112, 113 or Acct. 101, 102, 103	3	3	3
Pol. Sci. 104, 105, Acct. 151	3	3	3
Language Group	3	3	3
Biology Group	3	3	3

	Quarter Credits		
Senior Year:	I	II	III
Bus. Ad. 104, Econ. 167, 160	3	3	3
Econ. 110, 150, Acct. 21	3	3	3
Mkt. 121	3		
Bus. Ad. 112 or 113			3
Ag. Econ. 105			3
Soc. 101, 150	3	3	
Pol. Sci. 101	3		
Pol. Sci. 103			3
Elective		6	

SUGGESTED SPECIALIZED COURSE IN BUSINESS ADMINISTRATION

	Quarter Credits		
Junior Year:	I	II	III
Marketing 101, 102, 103	3	3	3
Bus. Ad. 101, Mkt. 121, 122 or Mkt. 111, 112, 113	3	3	3
Pol. Sci. 104, 105, Bus. Ad. 107	3	3	3
Pol. Sci. or History or Soc.	3	3	3
Biology Group	3	3	3

	Quarter Credits		
Senior Year:	I	II	III
Bus. Ad. 101, Mkt. 131, 132	3	3	3
Mkt. 121, Econ. 150, 160	3	3	3
Acct. 101, 102, 103	3	3	3
Bus. Ad. 112 or 113			3
Econ. 167		3	
Bus. Ad. 104	3		
Language Group	3	3	3

SUGGESTED SPECIALIZED COURSE IN COMMERCIAL TEACHING

	Quarter Credits		
Freshmen:	I	II	III
Econ. 1, 2, 3	3	3	3
Eng. 10, Sec. 1	3	3	3
Steno. 1, 2, 3	4	4	4
Typewriting	1	1	1
Hist. or Pol. Sci.	3	3	3
Exact Science	3	3	3
Sophomore:			
Steno. 6, 7, 8	4	4	4
Pol. Sci. or Hist. or English	3	3	3
Biology Group	3	3	3
Acct. 1, 2, 3	4	4	4
Educ. 31, 32, 33	3	3	3

	Quarter Credits		
Junior:	I	II	III
Educ. 101, 102, 103	3	3	3
Acct. 101, 102, 103	3	3	3
Bus. Ad. 1, 2, 3	3	3	3
Pol. Sci. 104, 105	3	3	
Econ. 125 or Acct. 151 or B. A. 112			3
Biol. Group	3	3	3
Elective	2	2	2
Senior Year:			
Educ. 111	3		
Mkt. 101, 102, 103	3	3	3
B. A. 113			3
Bus. Ad. 104, Econ. 167, Econ. 160	3	3	3
Off. Mgt. 20 or Econ. 150		3	
Pol. Sci. or Hist. or Eng.	3	3	3
Elective	4	4	4

SUGGESTED SPECIALIZED COURSE IN MARKETING

	Quarter Credits		
Junior Year:	I	II	III
Mkt. 101, 102, 103	3	3	3
Mkt. 111, 112, 113	3	3	3
Pol. Sci. 104, 105, Econ. 125	3	3	3
Mkt. 161, 162, 163	3	3	3
Advertising Art	1	1	1
Biology Group	3	3	3

	Quarter Credits		
Senior Year:	I	II	III
Bus. Ad. 101, Mkt. 131, 132	3	3	3
Bus. Ad. 104, Econ. 167, 160	3	3	3
Mkt. 121, Econ. 150, Bus. Ad. 113	3	3	3
Mkt. 171	3		
Advertising Art	1	1	1
Elective		3	3

SUGGESTED SPECIALIZED COURSE
SECRETARIAL WORK

	Quarter Credits		
	I	II	III
Freshman Year:			
English 10, Sec. 1	3	3	3
Typewriting 1	1	1	1
Stenography 1	4	4	4
Office Mgt. 10, 1, 2	1	1	1
Acct. 1, 2, 3	4	4	4
Economics 1, 2, 3	3	3	3
Sophomore Year:			
Hist. or Pol. Sci.	3	3	3
Typewriting 2	1	1	1
Stenography 2	4	4	4
Language Group	3	3	3
Biology Group	3	3	3
Elective	2	2	2
Junior Year:			
Mkt. 101, 102, 103	3	3	3
Pol. Sci. 101, 102, 103	3	3	3
Bus. Ad. 1, 2, 3	3	3	3
Accounting or Exact Science Group	3	3	3
Biology Group	3	3	3
Senior Year:			
Mkt. 161, 162, 163 or English 125, 126, 127	2	2	2
Pol. Sci. 104, 105	3	3	
Bus. Ad. 107			3
Of. Mgt. 20		3	
Bus. Ad. 104	3		
Econ. 167, 160		3	3
History	3	3	3
B. A. 101	3		
B .A. 113			3
Elective	2	2	2

SUGGESTED COURSE FOR ELEMENTARY TEACHERS

	Quarter Credits		
	I	II	III
Freshman Year:			
English Literature	3	3	3
History	3	3	3
Science	3	3	3
Art	3	3	3
Music, Public School	2	2	
Psychology, Introductory	3		
School Hygiene		3	
Physiology			5
Sophomore Year:			
Sociology	3	3	3
Economics	3	3	3
Agriculture or Home Economics	3-4	3-4	3-4
Methods of Teaching or Principles of Ed.		3	3
*Apprentice Teaching			
History of Ed.	3	3	3

---

* Training will be provided in connection with the Logan City Schools.

Outline of

SMITH-HUGHES TEACHER TRAINING

The Smith-Hughes Teacher Training work in the Utah Agricultural College is authorized and subsidized by the Federal Government through the Smith-Hughes Act and authorized by an act of the 1919 session of the Legislature of the State of Utah. It is under the direction of the State Board for Vocational Education and its agents the State Supervisors.

As at present organized, the Department of Education aims to train Smith-Hughes teachers for positions in agriculture, farm mechanics, home economics.

Training of Smith-Hughes teachers in Agriculture.

1. General requirements:

   a. Fifteen units of high school credit or the equivalent is required for entrance.

   b. For graduation, 180 Quarter hours and the necessary work in physical education and military science will be required of all students.

   c. State credentials to teach require 27 Quarter hours in professional studies.

Following is a suggestive course for students in residence who are prospective Smith-Hughes teachers:

	I	II	III
Freshman Year:	I	II	III
Chemistry	5	5	5
Botany	5	5	5
English	2	2	2
Agronomy	4	4	
Horticulture			4
Sophomore Year:	I	II	III
Physics	3	3	3
Zoology	3	3	
History	2	2	2
Physiology			3
Vet. Science	4		
Animal Husbandry		5	3
Pub. Speaking	3		
Pub. Speaking or Eng. Lit.		3	
Pub. Speaking or Eng. Lit.			3
History of Mod. Ed., incl. Voca. Ed.			3
Junior Year:	I	II	III
Geology	5	5	
Bacteriology			5
Agronomy Soils	4		
Economics		3	3
Irrigation			5
Prin. of Psychology	3		
Psychology of Adolescence (Secondary Education)		3	
Edu. Psychology			3
Farm Mechanics	5		
English		5	
Senior Year:	I	II	III
Rural Edu.		3	
Methods of Teaching Agr.	2	2	2
Apprentice Teaching		5 or10	
Feeds and Feeding	5		
Plant or Animal Breeding		5	
Horticulture			5
Farm Management	5		
Sociology	3	3	
Dairying		4	
Entomology			3

By arrangement with the Logan City School Board, observations and apprentice-teaching will be in the Smith-Hughes classes in agriculture in the Logan High School, during the Winter and Spring quarters.

Opportunity will be afforded in connection with the same classes to supervise Smith-Hughes projects during the summer. See Outline following.

Students in Smith-Hughes Teaching in Agriculture are advised to elect their technical and professional studies as near the following percentages as conditions will permit:

a. Technical agriculture 40 per cent so distributed as to prevent too narrow specialization. The work should include at least one basic course in each important department of applied agriculture.

b. The related work in the biological and physical sciences 20 per cent.

c. Professional studies preparing for Smith-Hughes Teaching 15 per cent.

d. Language and Literature 10 per cent.

e. Social Science 10 per cent.

f. Elective 5 per cent.

Project Management and Practice in Agriculture.

Candidates for graduation in Agriculture must take an examination in farm practice with the department head, with whom they are majoring, the director of the School of Agriculture, and one other man to be selected by them.

The purpose of this examination is to insure adequate practical experience in the technique of farming, without which a man is not a good teacher of Agriculture or a good farm manager.

To prepare a man for this examination, farm practice is considered under three heads:

1. Elementary farm practice, technique, proficiency in hitching up a team, in handling a team on the wagon, plow, or grader; adjusting a harness, milking, building a fence, preparing land for irrigation, etc.

2. Project management. Some unit of the farming business planned and conducted to a conclusion under the direction of the professor of farm practice, the head of the department in whose field the project comes, and the teacher of methods in agriculture.

3. Farm Management. The whole business of a farm planned

and run as a business under the same leadership, in which complete records are kept.

Students who have had farm experience can readily pass I. All Smith-Hughes students should take 2, for which satisfactory examination in 1 should be prerequisite. It is assumed that after going thoroughly through one project, the organizaztion of other projects will be within the student's power. Smith-Hughes students should take 3 for which 2 is prerequisite. They should be able to analyse a farmers business and point out the profitable and the unprofitable units of it and tell why. Such training should be prerequisite to the teaching of agriculture.

The Summer Quarter.

Professional and Technical courses are being planned for the Summer Quarter for the convenience of those teachers in service desiring to qualify for Smith-Hughes teaching of Agriculture. These courses will be:

1. Undergraduate, for elementaryy school teachers working for degrees.
2. Graduate, for Smith-Hughes workers now in service who can get furloughs to take these courses thereby increasing their efficiency. The State Supervisor of Smith-Hughes Agriculture will co-operate in planning and giving this work.

Helping Teachers in Service.

The Smith-Hughes Teacher Training Department of the U. A. C. will co-operate with the State Department in training Smith-Hughes teachers in service. This will be done by means of:

1. District and Regional Conferences.
2. Visiting Schools and helping inexperienced teachers plan and organize their work.
3. By preparing Outlines, Bulletins, and "News Letters."

RECITATION TABLE

The recitation hours are sixty minutes in duration and begin at 8:00 a. m. The following shows the entire schedule:

1 hour, 8:00— 9:00.
2 hour, 9:00—10:00
3 hour, 10:00—11:00
4 hour, 11:00—12:00
5 hour, 12:00— 1:00
6 hour, 1:00— 2:00
7 hour, 2:00— 3:00
8 hour, 3:00— 4:00
9 hour, 4:00— 5:00

From 11:30 a. m. to 1:30 p. m., the cafeteria is open.

On Mondays, the sixth period (from 1:00 to 2:00) is devoted to chapel exercises, on Wednesdays to Student Body meetings and on Friday this period is left open to miscellaneous meetings.

Departments of Instruction

1. Accounting and Business Practice.
2. Agricultural Economics.
3. Agricultural Engineering.
   a. Agricultural Surveying.
   b. Roads.
   c. Rural Architecture.
   d. Rural Sanitation.
4. Agronomy.
5. Animal Husbandry.
   a. Poultry Husbandry.
6. Art.
7. Auto Mechanics.
8. Bacteriology and Physiological Chemistry.
9. Botany.
10. Business Administration.
11. Chemistry.
12. Correspondence Studies.
13. Dairy Husbandry.
14. Economics.
15. Education and Pedagogy.
16. English.
17. Entomology.
18. Farm Management, Extension.
19. Farm Mechanics.
20. Foods and Dietetics.
21. Geology.
22. History.
23. Home Management Extension.
24. Horticulture.
25. Household Administration.
26. Irrigation and Drainage.
27. Junior Extension.
28. Library Economy.
29. Marketing.
30. Mathematics.
31. Mechanic Arts.
   a. Forging and General Blacksmithing.
   b. Machine Work.
   c. Mechanical Drawing.
   d. Woodwork and Housebuilding.
32. Methods in Experimentation.
33. Military Science and Tactics.
34. Modern Languages and Latin.
35. Music.
36. Physical Education.
   a. For Men.
   b. For Women.
37. Physics.
38. Physiology.
39. Political Science.
40. Public Speaking.
41. Range Management.

42. Rural Public Health.
43. Sociology.
44. Stenography and Typewriting.
45. Textiles and Clothing.
46. Veterinary Science.
47. Zoology.

Courses of Instruction

ACCOUNTING AND BUSINESS PRACTICE

Professor P. E. Peterson.
Assistant Professor Thain.

VOCATIONAL COURSE.

a. Farm Bookkeeping. An elementary course in bookkeeping in which suitable records for the keeping of farm accounts will be developed. Stress will be laid on the single entry method, the application of debit and credit thereto and the preparation of statements from the records. Two lectures, six hours practice work each week. Fall quarter. Repeated Winter quarter. Four credits.

Lec. Th. S. 8:00. Practice hours 2:00 to 5:00 daily.

Assistant Professor Thain.

JUNIOR COLLEGE COURSES.

The Junior college courses will be open to vocational students.

1. Technic of Bookkeeping. Development of the principles of debit and credit, functions of the account, technic of recording the business transactions in the records, preparation of statements and closing the books. Two lectures, six hours practice each week. Four credits.

Fall quarter—Lec. T. Th. 2:00. Practice hours, 2:00 to 5:00 daily. *Assistant Professor Thain.*

Winter quarter—Lec. T. S. 10:00. Practice hours, 2:00 to 5:00 daily. *Professor Peterson.*

2. BOOKKEEPING AND ACCOUNTING PRACTICE. A continuation of course 1, introducing more advanced technic such as: controlling accounts; accruals; deferred items; depreciation; special columns and special journals; departmentalization, etc. Partnership accounting and single entry are also taken up. Prerequisite, Accounting 1. Two lectures, six hours practice work each week. Four credits.

Winter quarter—Lec. T. Th. 2:00. Practice hours daily, 2:00 to 5:00. *Assistant Professor Thain.*

Spring quarter—Lec. T. S. 10:00. Practice hours daily, 2:00 to 5:00. *Professor Peterson.*

3. CORPORATION AND FACTORY ACCOUNTING. Accounts peculiar to corporations, as accounting for capital stock, treasury stock, surplus, reserves, dividends, etc. Voucher accounting. Accounting for manufacturing enterprises where no cost system is in use. Prerequisites, Accounting 1 and 2. Two lectures, six hours practice work each week. Four credits.

Spring quarter—Lec. T. Th. 2:00. Practice hours daily, 2:00 to 5:00. *Assistant Professor Thain.*

4. BOOKKEEPING FOR CO-OPERATIVE ENTERPRISES. A study of the principles of bookeeping and accounting as applied to farmers' co-operative enterprises, such as creameries and grain elevators. Two lectures, six hours practice work each week. Practice periods to be arranged with instructor. Winter quarter. Four credits.

Lec. T. Th. 1:00: *Assistant Professor Thain.*

5. FARM BOOKKEEPING. Principles of bookkeeping and accounting as applied to the special needs of different types of farming. Single and double entry. Two lectures, six hours practice work each week. Practice hours to be arranged with instructor. Fall quarter. Four credits.

Lec. T. Th. 1:00. *Assistant Professor Thain.*

6. SHOP ACCOUNTING. A study of the fundamentals of bookkeeping technic and their application to conditions found in the small shop and in contract work. Two lectures, six hours practice work each week. Practice periods to be arranged with instructor. Spring quarter. Four credits.

Lec. T. Th. 1:00. *Assistant Professor Thain.*

21. ACCOUNTS OF BUILDING AND LOAN ASSOCIATIONS, BANKS, AND TRUST COMPANIES. A practical course in the organization, business practice and accounting methods of building and loan associations, banks and trust companies. Account analysis in commercial banks. Special attention will be given to labor saving methods and mechanical equipment. Prerequisites, Accounting 1, 2, and 3. Two lectures, six hours practice work each week. Practice periods to be arranged with instructor. Spring quarter. Four credits.

Lec. M. W. 10:00. Practice periods, 2:00 to 5:00 daily.

Assistant Professor Thain.

31. RETAIL AND DEPARTMENT STORE ACCOUNTING. Application of the accounting principles to the special problems found in retail merchandising, as, classification of accounts, departmentalization of income and expenses, stock handling methods. Prerequisites, Accounting 1, 2, and 3. Three lectures. Fall quarter. Three credits.

Lec. M. W. F. 10:00. *Assistant Professor Thain.*

SENIOR COLLEGE COURSES

101, 102, 103. Principles of Accounting. Essentially a course in theory with practice reduced to a minimum. Emphasis will be placed upon the interpretation of accounts. The course is intended to meet the needs of the general student, students training for executive positions and students who, upon entering the professions, may as investors, wish to analyze the various accounting statements and published reports. It is desirable that students complete Economics 1 and 2, and Mathematics 61, before registering for this course. Graduate credit may be allowed for this course upon completion of additional work. Lectures and assigned problems. Fall, Winter and Spring quarters. Three credits each quarter.

Lec. T. Th. S. 9:00. *Professor P. E. Peterson.*

107. Household Accounts The practical application of accounting principles and practice to home management. Lectures and assigned problems. Fall quarter. Four credits. Practice hours may be taken any day from 2:00 to 5:00.

Lec. T. Th. 1:00. *Professor P. E. Peterson.*

121. Accounting Problems. This course aims to develop analytical power, initiative and resourcefulness in the handling of accounting problems. The problems are largely drawn from the Institute examinations. Prerequisites, Accounting 101, 102, 103 or their equivalent. Lectures and assigned problems. Fall quarter. Three credits.

Lec. T. Th. S. 11:00. *Professor P. E. Peterson.*

131. Principles of Auditing. A study of the principles of auditing with assigned problems. For Senior students. A major subject for students who plan to enter the accounting profession. Graduate credit may be allowed upon the completion of additional work. Winter quarter. Three credits.

Lec. T. Th. S. 11:00. *Professor P. E. Peterson.*

132. AUDITING PROCEDURE. The procedure in making an audit and the proper reporting of it constitutes the major part of this course. Where possible, students will be required to make an actual audit. A major subject for students who plan to enter the profession of accounting. Graduate credit may be allowed upon the completion of additional work. Prerequisite, Accounting 131. Lectures and field work. Spring quarter. Three credits. Two additional credits may be allowed for extra field work.

Lec. T. Th. S. 11:00. *Professor P. E. Peterson.*

141. PUBLIC SERVICE CORPORATION ACCOUNTS. A study of the accounting systems of steam and electric railways, including station accounting. Prerequisites, Accounting 101, 102, 103. Lectures and assigned problems. Three credits. Course will not be given unless 8 students apply.

Hours to be arranged. *Professor P. E. Peterson.*

151. INSURANCE AND INSURANCE ACCOUNTING. Functions of life insurance, premiums, reserves, types of policies, special benefits and insurance accounting. Fire insurance. Prerequisites, Economics 1 and 2, Mathematics 61 and Accounting 101, 102, 103. Lectures and assigned problems. Spring quarter. Four credits.

Lec. T. Th. S. 8:00. *Professor P. E. Peterson*

161. MUNICIPAL ACCOUNTS. A study of the accounting systems of cities, counties and states. The importance of the budget in municipal expenditures. A course in public finance should precede or parallel the taking of this course. Prerequisites, Accounting 101, 102, 103, Political Science 2. Lectures and assigned problems. Four credits. Not given unless at least eight apply.

Hours to be arranged. *Professor P. E. Peterson.*

OFFICE MANAGEMENT

Professor P. E. Peterson.
Assistant Professor W. E. Thain.
Miss Thelma Fogelberg.

JUNIOR COLLEGE COURSES.

1. Calculator Operation. Method of operating calculators. Accuracy and speed secured. Five practice hours each week. Fall or Winter quarter. One credit. Open to Vocational students.

Fall, Sec. 1. 10:00 daily except Thursday.
Winter, Sec. 2. 2:00 daily except Saturday.

Miss Fogelberg.

2. Calculator Operation. Advanced work on the calculator for increased skill. Accuracy and speed secured. Five practice hours each week. Winter or Spring quarter. One credit. Open to Vocational students.

Winter, Sec. 1. 10:00 daily except Thursday.
Spring, Sec. 2. 2:00 daily except Saturday.

Miss Fogelberg

10. Machine Bookkeeping—Burroughs. Instruction in the correct operation of the Burroughs posting machine. Practice given in bank and ordinary retail store machine bookkeeping Accuracy and speed secured. Five practice hours each week Fall or Winter quarter. One credit. Open to Vocational students.

Time to be arranged with instructor.
Sec. 1. 8:00 daily except Saturday.
Sec. 2. 10:00 daily except Thursday.
Sec. 3. 2:00 daily except Saturday.

Miss Fogelberg

15. MACHINE BOOKKEEPING—ELLIOTT-FISHER. Instruction in the operation of the Elliott-Fisher bookkeeping Machine. Five practice hours each week. Fall or Winter quarter. One credit. Open to Vocational students.

Time to be arranged with instructor.
Sec. 1. 8:00 daily except Saturday.
Sec. 2. 10:00 daily except Thursday.
Sec. 3. 2:00 daily except Saturday.

Miss Fogelberg.

SENIOR COLLEGE COURSES.

101. OFFICE TRAINING FOR STENOGRAPHERS. The aim of this course is to furnish students the necessary experience to enable them to take up the duties of an experienced stenographer in an office. Ample practice is given in filing, stenciling and in the use of modern office appliances, such as the dictaphone, mimeograph, calculating and bookkeeping machines and in taking dictation from the various departments of the College. Prerequisites, reasonable proficiency in stenography, typewriting, and English 10 (Business English). Fall, Winter and Spring quarters. Two credits each quarter.

(Not given in 1922-23.)

110. DUTIES OF PRIVATE SECRETARIES. Position defined; meeting callers, handling correspondence, outlines and reports; sources of information; editing and proof reading; handling appointments, reporting, etc. Prerequisites, reasonable proficiency in stenography and typewriting. Winter quarter. Three credits.

(Not given in 1922-23.)

120. OFFICE MANAGEMENT. Study of office location, layout, equipment and administration; selection and training of employees; office records; filing methods. Prerequisites, Accounting 1 or 101, 102, 103. Winter quarter. Three credits.

Lec. M. W. F. 10:00. *Assistant Professor Thain.*

AGRICULTURAL ECONOMICS

(FARM MANAGEMENT)

Professor Brossard.

Note.—Students in either the School of Agriculture or the School of Commerce and Business Administration may major in this department.

Students in the School of Agriculture may present credits in any of the following courses towards their major: Agronomy 101, and 106; Animal Husbandry 1 and 102; Economics 1, 2, 3, 120 and 121; Horticulture 1, 2, 3; and Range Management 1. They will all be required to take Agricultural Economics courses 101, 102, 103, 104, 105 and 209.

Students in the school of Commerce and Business Administration may submit credits in any of the following courses towards their major: Accounting 101, 102, 103, 4, and 5; Agronomy 101, 106, and 114; Animal Husbandry 1 and 102; Business Administration 8; Economics 25, 30, 120, 121, 160, 167, 150 and 180;; Horticulture 1, 2, 3; Marketing 71, 102, 103, 111, 131, 132, and 141; Political Science 104, 105 and 106; Range Management 1; and Sociology 101, 150 and 160. All such students will be required to take Agricultural Economics courses 101, 102, 103, 104, 105 and 209.

VOCATIONAL COURSES.

a. Farm Management. A non-technical course in the principles of farm management designed especially for farmers or those soon to become farm operators either on their own farms or as tenants or managers. Winter quarter. Five credits.

Daily except Thursday 11:00. *Professor Brossard.*

SENIOR COLLEGE COURSES.

101. PRINCIPLES OF AGRICULTURAL ECONOMICS. A general course in the principles and problems of agricultural economics, including production on the farms, consumption of the products of the farms and the distribution of the agricultural income. Prerequisites, Economics 1, 2, 3, or 120, 121. Fall quarter. Three credits.

M. W. F. 10:00. *Professor Brossard.*

102. FARM MANAGEMENT. A general course in the principles of farm management. A study of the problems involved in choosing, buying, planning, organizing and managing a farm. Discussions of proper size, balance, diversity and quality of farm business; relation of livestock, crops, pastures and ranges; efficient use of equipment and man and horse labor. Prerequisites, Economics 1, 2, 3, or 120, 121; Animal Husbandry 1 or 102; and Agronomy 101 (or equivalent) and 106. Winter quarter. Three credits.

M. W. F. 10:00. *Professor Brossard.*

103. FARM COST ACCOUNTING. Theory of farm cost accounting combined with practice in keeping a simple yet complete set of farm cost accounts. This course stresses the analyzing and interpreting of results and their use in organizing and managing the farm business. Prerequisite, Accounting 5. Winter quarter. Three credits.

T. Th. S. 9:00. *Professor Brossard.*

104. TYPES OF FARMING. A study of the natural and economic factors affecting types of farming in Utah, the United States and other countries, to determine the most profitable types for given times and conditions, and the neeeded adjustments in types to meet changing conditions. Prerequisite, Agricultural Economics 102. Spring quarter. Three credits.

M. W. F. 10:00. *Professor Brossard.*

105. RURAL CREDITS. A study of the credit needs of farmers and methods of meeting these needs. This involves a study of the Federal Farm Loan System, co-operative banking and new legislation needed to provide for financing adequately the farming business of the country. Spring quarter. Three credits.
T. Th. S. 9:00. *Professor Brossard.*

GRADUATE COURSES.

206. LAND ECONOMICS. A study of such important problems of land economics as the following: (1) the history of nations as affected by their land policies, (2) the concept of private property in land, (3) land classification, (4) land utilization, (5) land valuation, (6) land taxation, (7) land settlement and its relationship to water and irrigation institutions, (8) land ownership and tenancy and their desirability and disadvantages, (9) range and ranch land, (10) economics of forest land, and (11) transportation and the use of land. Open only to seniors and graduate students. Fall quarter. Two credits.
T. S. 10:00. *Professor Brossard.*

207. TENANCY. History and extent of farm tenancy in the United States. Experience of European countries with tenancy problems. Tenancy as a social institution. Tenancy as a step in the economic ladder of progress of farmers. Evils of tenancy. Suggested methods of diminishing or eliminating the evils of tenancy. Methods of renting farms. Types of farming and the farm lease contract. Essentials of a good farm lease. Prerequisite, Agricultural Economics 102. Spring quarter. Two credits.
T. S. 10:00. *Professor Brossard.*

208, 209, 210. RESEARCH. Special investigations in agricultural economics or farm management. Only those senior and graduate students who present an acceptable plan for an investigation will be admitted. Fall, Winter and Spring quarters. Two credits each quarter.

Two afternoons each week, 2:00 to 5:00.

Professor Brossard.

211, 212, 213. SEMINAR. All senior and graduate students majoring in this department are required to take part in these round-table discussions of current problems and recent publications in Agricultural Economics. Fall, Winter and Spring quarters. One credit each quarter.

Time to be arranged. *Professor Brossard.*

For closely related course see:

MARKETING 113. (Cooperation in Agriculture.)

Professor Wanlass.

AGRICULTURAL ENGINEERING

AGRICULTURAL SURVEYING.

PROFESSOR RAY B. WEST.
MR. McDONALD.

JUNIOR COLLEGE COURSES.

1. FARM SURVEYING. For students of agriculture. Practice in the handling of surveying instruments that may be purchased by the average farmer. Running of ditch lines, grading and leveling of land, retracting of section lines and the laying out of drains. Spring quarter. Three credits.

Lec. F. 12:00; lab. M. W. 2:00 to 5:00. *Professor West.*

2, 3. SURVEYING FOR AGRICULTURE ENGINEERING STUDENTS. This is a more thorough course than Agricultural Surveying 1, and covers in addition to the above a study of the instruments generally used by engineers, topographic surveying, hydrographic surveying and some mine and city surveying. Prerequisite, Trigonometry. Fall and Spring quarters.

Lec. T. 1:00; lab. T. Th. 2:00 to 5:00. *Professor West.*

5. Soil and Other Agricultural Surveys. The methods of preparing maps of a given agricultural area and surveys of the various agricultural interests within the area. Any quarter. Three credits. *Professor West.*

4. Mapping. Practice in the mapping of the various kinds of surveys that may be encountered by the agricultural engineer Winter quarter. Three credits.

Lab. M. W. F. 2:00 to 5:00. *Professor West*

SENIOR COLLEGE COURSE.

102. Canal and Road Surveying. Instruction and practice in the application of the surveying methods used in the layin out and construction of canals and roads. Prerequisite, Agricultural Surveying 1. Open to Junior College students. Sprin quarter. Five credits.

Lec. T. Th. S. 9:00; lab. M. W. 2:00 to 5:00.

May be used as a major in roads. *Professor Wes*

ROADS

Professor Ray B. West.
Professor William Peterson.

JUNIOR COLLEGE COURSES.

1. Road Construction. Road location, grade, drainag resistance to traction, road materials, construction methods ar costs of all kinds of roads. Fall quarter. Five credits.

Daily except Thursday at 11:00. *Professor We*

2. Road Materials. Dynamical and structural geology as it applies to construction work. Special attention is given to materials affecting road construction, dams and excavations. Winter quarter. Five credits.

Daily except Thursday at 11:00. *Professor Peterson.*

4. Inspection of Road Construction. A study of a road inspector's duties on all types of road and pavement construction. Three credits. Spring quarter.

M. W. F. 11:00. *Professor West.*

SENIOR COLLEGE COURSES.

101. Road Maintenance. Road organiation, employment of labor, cost of maintenance, width of tires, size of wheels, maintaining drainage, repairing worn surfaces, comparison of different road machines, etc. Three credits. Spring quarter.

T. S. 11:00. *Professor West.*

102. Highway Structures. Study of highway structures, principally bridges and culverts, but including catch basins, drains, fences, etc. Three credits. Winter quarter.

Hours to be arranged.

Roads 102 may be applied as a major. *Professor West.*

RURAL ARCHITECTURE.

Professor Ray B. West.
Professor Fletcher.
Assistant Professor Feldman.

JUNIOR COLLEGE COURSES.

1. Farm Structures. The arrangement, design and construction of barns, stables, poultry houses, silos and other frame tructures. Winter quarter. Three credits.

M. W. F. 11:00. *Professor West.*

3. Materials of Construction. The chemistry of iron, steel, the alloys, etc., and their special use in machine parts; strength, composition and proper use of the woods, plaster, glass, glue, paints, cement, brick, etc., in building. Fall quarter. Five credits.

Daily except Saturday 8:00. *Professor West.*

2. Concrete Construction for Agricultural Purposes. Various mixtures of cement and their uses; the use of concrete in the making of barns, water troughs, posts, etc. Spring quarter. Three credits.

Hours to be arranged. *Professor West.*

4. Planning of Farm Structures and Homes. The making of plans for farm buildings, including complete specifications, costs of materials and erection. Hours to be arranged.

(Not given in 1922-23.) *Professor West.*

5. House Building and Contracting. Various methods of construction; the frame, two brick, three brick, stucco, shingle, cement block and stuccoed hollow tile; cost and economy of each; interior finishing. Spring quarter. Five credits.

Daily except Saturday 8:00. *Professor West.*

SENIOR COLLEGE COURSES.

101. Mechanics of Framed Structures. The strength and the design of joints in timber framing. Holding power of nails, screws, drift bolts, etc. Design of beams, columns and simple trusses in wood. Prerequisites, plane trigonometry and physics. Winter quarter.

Daily except Saturday 8:00. *Professor West.*

102. REINFORCED CONCRETE. The design of beams, columns and floor slabs in reinforced concrete and the application of the principles of design to retaining walls, cisterns, etc. Three credits. Fall quarter.

Hours to be arranged. *Professor West.*

103. RURAL ARCHITECTURE. Architectural composition. Study of the principles of composition as applied to buildings, emphasis being put on correction of common errors in the design of elevations. For related work see Art 24 and Horticulture 8. Open to Junior College students. Ten studio hours. Fall quarter. Three credits.

Hours to be arranged. *Professor Fletcher.*

104. ARCHITECTURAL COMPOSITION. Continuation of course 103 with special attention to the relation of all the parts of the exterior and architectural effect in environment. For related work see Horticulture 9. Prerequisite, Rural Architecture 103. Open to Junior College students. Ten studio hours. Winter quarter. Three credits.

Hours to be arranged. *Professor Fletcher.*

105. STYLES IN ARCHITECTURE. Study of the great styles or periods of architecture with special attention to those phases most vital to an understanding of modern building. Open to Junior College students. Ten studio hours. Spring quarter. Three credits.

Hours to be arranged. *Professor Fletcher.*

RURAL SANITATION

Professor Greaves.
Professor Ray B. West.
Assistant Professor Carter.

JUNIOR COLLEGE COURSE.

Parasitology (see Zoology 5). *Professor Hawley.*

SENIOR COLLEGE COURSES.

106. Rural Water Supply and Waste Disposal. Methods of (a) supplying farm and rural communities with sanitary water; (b) handling waste of the farm and small town. Spring quarter. Three credits.
M. W. F. 9:00. *Professor West.*

Sanitation. Special attention will be paid to school sanitation. (See Bacteriology 108). *Professor Greaves.*

Sanitary Analysis. (See Bacteriology 106). *Professor Greaves.*

Dairy Bacteriology. Lecture (See Bacteriology 104). *Assistant Professor Carter.*

Dairy Bacteriology. Laboratory. (See Bacteriology 105). *Assistant Professor Carter.*

Sanitary Statistics. (See Bacteriology 109). *Assistant Professor Carter.*

AGRONOMY

Professor Stewart.
Assistant Professor Pittman.
Mr. Bracken.
Mr. Heywood.
Mr. ————

Note.—Students who major in Agronomy are required to take courses 1, 2, or 3, 106, and either 108 and 110 or 104 and 109. Course 114 is also recommended. Credit for Irrigation 1 and Agricultural Economics 102 will be accepted toward a major in Agronomy, provided the grade obtained is "B" or better.

VOCATIONAL COURSES.

a. Elementary Agronomy. Practical information on crops and soils for short practical-course students. Winter quarter. Four credits.

Lec. T. Th. S. 11:00; lab. M. 2:00 to 5:00.

Mr. Bracken.

b. Dry-Farming. The methods best adapted to the growing of profitable crops on arid lands; the treatment of the soil; the soils and crops best adapted to arid farming; the region offering favorable conditions for its successful practice. Not given unless ten students apply. Winter quarter. Three credits.

T. Th. S. 10:00. *Mr. Bracken.*

JUNIOR COLLEGE COURSES.

1. Cereal Crops. The history, cultivation, production, and marketing of cereal crops, a basis for judging and grading plant

products. Must be preceded or accompanied by Chemistry 1, 2 and Botany 21, 22, 23. Winter quarter. Four credits.

Lec. M. W. F. 10:00; lab. T. 2:00 to 5:00.

Mr. Bracken.

2. ROOT CROPS. Sugar-beets, potatoes, mangles, turnips, other root crops, and beans. Cultural methods, market types, and commercial possibilities are studied in detail. Must be preceded or accompanied by Chemistry 1, 2 and Botany 21, 22, 23. Fall quarter. Four credits.

Lec. M. W. F. 10:00; lab. T. 2:00 to 5:00.

Professor Stewart and Mr. Heywood.

3. FORAGE AND MISCELLANEOUS CROPS. Alfalfa, clovers, grasses, and other crops. Methods of handling hay, meadow, and pasture management and soiling crops are discussed. Must be preceded or accompanied by Chemistry 1, 2 and Botany 21, 22, 23. Spring quarter. Four credits.

Lec. M. W. F. 10:00; lab. T. 2:00 to 5.00.

Professor Stewart and Mr. Heywood.

SENIOR COLLEGE COURSES.

101. CROP PRODUCTION. Essentials in the production of principal field crops; small-grains, corn, potatoes, sugar-beets, alfalfa, and pastures. Designed for students not in the School of Agriculture and for others wishing minimum work in crops. Prerequisites, Chemistry 1, 2 and Botany 21, 22, 23. Spring quarter. Five credits.

Lec. M. T. W. F. 10:00; lab. T. 2:00 to 5:00.

Mr. ————.

104. Weeds, Seeds, and Grading. Common weeds of Utah and methods of eradicating them; the quality and care of seeds; market classes and grades of grain, seeds, hay and potatoes. Prerequisites, Botany 21, 22, 23; Agronomy 1 and 2 or 3; some horticulture preferred. Not given unless ten or more students apply. Fall quarter. Two credits.

Lec. Th. 1:00; lab. M. 2:00 to 5:00. *Professor Stewart.*

105. Seed Analysis and Testing. Impurities of farm and garden seeds; methods of analysis and testing; the inspection and marketing of seeds. Prerequisites, Botany 21, 22, 23; Agronomy 1 and 3 or 104. Not given except on application of four or more students who have open the same two laboratory periods of three hours each. Any quarter. One, two, or three credits. Two laboratory periods a week.

Time to be arranged. *Professor Stewart.*

106. Soils. Review of the entire field of soil study; designed as a foundation course for all students of agriculture. Prerequisites, Chemistry 1, 2 (high school chemistry not adequate). Fall quarter. Four credits.

Lec. M. W. F. 11:00; lab. Th. 2:00 to 5:00.

Assistant Professor Pittman.

108. Management of Arid Soils. The composition, nature and management of soils of arid regions; special attention to water relations, alkali, rotations and other problems in the management of arid soils. Prerequisites, Agronomy 106 and Geology 2. Winter quarter. Four credits.

Lec. T. Th. S. 10:00; lab. Th. 2:00 to 5:00.

Assistant Professor Pittman.

109. Plant Breeding. Varieties of field crops and their adaptation, selection and improvement; attention to the methods

of plant breeding as practiced in America and Europe. Prerequisites, Agronomy 1 and 2 or 3; Zoology 111; and Botany 21, 22, 23. Winter quarter. Four credits.

Lec. M. W. F. 11:00; lab. W. 2:00 to 5.00.

Professor Stewart.

110. Soil Fertility. Principles of soil fertility; fertilizers and their most productive use; review of experimental work in America and Europe. Prerequisites, Chemistry 1, 2, 3 and Agronomy 106. Spring quarter. Two credits.

Lec. T. Th. 11:00. *Assistant Professor Pittman.*

112, 113. Seminar. Current agronomic literature; agricultural problems; assigned topics. Required of seniors and graduate students in agronomy; open also to juniors. Winter and Spring quarters. One credit each quarter.

Th. 1:00. *The Department.*

114. History of Agriculture. Development of agriculture, with emphasis on social and scientific phases; the successive steps by which modern agriculture has attained its present status. Winter quarter. Two, three, or four credits.

T. Th. S. 9:00. *Professor Stewart.*

GRADUATE COURSES.

207. Comparative Soils. Soils of Utah; their origin, composition, and agricultural value; soil provinces of the United States, especially those of the arid regions; the soil survey. Prerequisites, Agronomy 6 and Geology 2. Spring quarter. Two credits.

Th. 10:00; lab. W. 2:00 to 5:00.

Assistant Professor Pittman.

211. ADVANCED LABORATORY IN SOILS. Chemical and mechanical analysis or special laboratory work. Three hours or more, any quarter. Credit in proportion to work.

Hours to be arranged. *Assistant Professor Pittman.*

213. RESEARCH. Graduate students specializing in agronomy are required to do research in some branch of the subject. Open to approved seniors. Time and credit to be arranged with the instructors.

Professor Stewart and Assistant Professor Pittman.

215. PLANT PRODUCTION. Recent experimental information on plant production; analysis of research methods; classification of important varieties of field crops; review of the scientific literature. Prerequisites, Botany 21, 22, 23, Bacteriology 1, Agronomy 1 or 101, and 106, or equivalent. Irrigation 1, Botany 105, and Agronomy 109 are also recommended. Given in 1922-23 if ten or more students apply. Open to approved seniors. Spring quarter. Two to four credits.

Lec. T. Th. 9:00. *Professor Stewart.*

ANIMAL HUSBANDRY

PROFESSOR CARROLL.
PROFESSOR GEORGE B. CAINE.
ASSISTANT PROFESSOR ALDER.

VOCATIONAL COURSE.

c. FEEDING AND MANAGEMENT. A non-technical course dealing with the practice of feeding and management of different classes of livestock. Winter quarter. Five credits.

Daily except Saturday 9:00. *Professor Carroll.*

JUNIOR COLLEGE COURSES.

1. MARKET TYPES. The judging of market types of horses, cattle, sheep and swine. Some score card practice is given, but most of the work is comparative judging of groups of animals. Five credits.

Sec. 1. Fall quarter, Lec. T. Th. S. 9:00; lab. W. F. 2:00 to 5:00. *Professor Caine.*

Sec. 2. Winter quarter, Lec. M. W. F. 11:00; lab. W. F. 2:00 to 5:00. *Professor Caine.*

2. BREED TYPES. The origin, history and characteristics of the different breeds of horses, cattle, sheep and swine, especial stress being laid upon their adaptability to western conditions. Fall quarter. Five credits.

Daily expect Th. 10:00. *Professor Caine.*

6. BEEF CATTLE PRODUCTION. The practical methods of beef production, including a consideration of range practice, feeding for market, fitting for show and general care and management. Winter quarter. Three credits.

(Not given 1922-23.) *Professor Caine.*

7. HORSE HUSBANDRY. Market types, handling of breeding and growing horses, fitting for show and sale and practical methods of handling and training horses. Winter quarter. Three credits.

T. Th. S. 9:00. *Professor Caine.*

8. SWINE MANAGEMENT. The management of the breeding herd, fattening for market and fitting for show. Spring quarter. Three credits.

(Not given 1922-23.) *Professor Caine.*

9. Sheep Husbandry. General care on range and farm, fattening for market, fitting for show and work in grading and sorting wool. Spring quarter. Three credits.
T. Th. S. 9:00. *Professor Caine.*

SENIOR COLLEGE COURSES.

101. Livestock Management. Practice in care and management of livestock and fitting for show and sale. Open only to a limited number of advanced students in Animal Husbandry. Laboratory work at barns. Fall or Spring quarter. Credit and hours to be arranged.
Professor Carroll and Professor Caine.

102. Practical Feeding. (Open only to students not majoring in Animal Husbandry.) How the animal uses its feed; classes of feeds, compounding rations for different purposes and for different classes of animals. Prerequisites, Agronomy 1 and 3 or 101. Fall quarter. Five credits.
Daily except Saturday 8:00. *Professor Carroll.*

103. Animal Nutrition. The anatomy and physiology of the digestive system; the purpose of nutrition; the theory and practice of feeding; with special reference to Utah conditions. Prerequisites, Organic Chemistry or Physiology 102 and Agronomy 101. Winter and Spring quarters. Five credits each quarter.
Daily except Saturday 8:00. *Professor Carroll.*

104. Laboratory Course. Laboratory work including the actual feeding of different classes of livestock for different purposes can be arranged for a limited number of students.
Time and credit to be arranged.

105. Principles of Breeding and Herd Book Study. An application of the principles of breeding to practical breeding operations; the place of animal breeding on the farm; methods of selection; aids to selection; grading; cross breeding; line breeding; inbreeding; herd books, pedigrees of noted individuals of the important breeds. Prerequisite, Zoology 111 (Genetics). Spring quarter. Five credits.

Daily except Saturday 9:00. *Professor Carroll.*

106. Advanced Stock Judging. The judging of groups of animals of all classes. Attendance at the State Fair and at all accessible county fairs is required. Prerequisites, Animal Husbandry 1 and 2. Fall quarter. Three credits.

Lab. M. T. Th. 2:00 to 5:00. *Professor Caine.*

110. The Field of Animal Husbandry. A brief survey of the field of animal husbandry in relation to other branches of agriculture; the economics of the livestock business and a brief consideration of the various opportunities in livestock. Designed as an informal course for students not registered in the School of Agriculture. Fall quarter.

M. W. F. 9:00. *Professor Carroll.*

120. Research. Advanced students may elect research work in any phase of animal husbandry.

Time and credit to be arranged with the department.

125. Seminar. Round table discussions of current literature and special phases of animal husbandry and dairying by advanced students and instructors of the department. One meeting a week.

Time to be arranged. *Professors Carroll, Caine, and Associate Professor Wilster.*

POULTRY HUSBANDRY

VOCATIONAL COURSES.

a. Practical Poultry Raising. A study of the fundamental principles involved in successful poultry raising. Not given unless ten students apply. Winter quarter. Four credits.

Lec. M. W. F. 9:00; lab. W. 2:00 to 5:00.

Assistant Professor Alder.

b. Short Practical Course. A practical course covering a period of two weeks. The student can spend all day or half the day studying problems of successful poultry raising.

Time to be arranged. *Assistant Professor Alder.*

JUNIOR COLLEGE COURSES.

1. General Poultry. A study of breeds, judging, breeding, incubation, brooding, housing, feeding and marketing. Winter or Spring quarter. Four credits.

Lec. M. W. F. 11:00; lab. M. 2:00 to 5:00.

Assistant Professor Alder.

2. General Poultry. Same as Poultry 1 except that no laboratory work is given. Winter or Spring quarter. Three credits.

M. W. F. 11:00. *Assistant Professor Alder.*

3. General Poultry. This course is planned to meet the needs of Home Economic students. Not given unless ten students apply. Spring quarter. Two credits.

T. Th. 10:00. *Assistant Professor Alder.*

4. INCUBATION AND BROODING. Practical and experimental work; the factors which influence the hatching quality of eggs and the raising of chicks. Prerequisites, Poultry 1. Spring quarter. Two credits.
M. W. 9:00. *Assistant Professor Alder.*

5. POULTRY MANAGEMENT. The housing, care, feeding and management of different breeds under western conditions. Prerequisite, Poultry 1. Winter quarter. Two credits.
Lec. M. W. 10:00; lab. by special arrangement.
Assistant Professor Alder.

6. BREEDS AND BREEDING. The origin and development of the breeds and varieties of poultry; practice in judging; a review of the literature on breeding for utility and exhibition. Prerequisite, Poultry 1. Winter quarter. Three credits.
(Not given in 1922-23.) *Assistant Professor Alder.*

7. POULTRY FEEDS AND FEEDING. A study of nutrition problems; the feeds and methods of feeding. Prerequisite, Poultry 1 or 2. Winter quarter. Three credits.
Lec. T. Th. S. 11:00. *Assistant Professor Alder*

SENIOR COLLEGE COURSES

125. RESEARCH. Research work in special problems. Prerequisites, Poultry 4 and 5.
Time and credit to be arranged. *Assistant Professor Alder.*

126. SEMINAR. Current poultry literature studied; assigned problems and special topics. Winter quarter. One credit.
Time to be arranged. *Assistant Professor Alder.*

127. Poultry Practice. Special practice at the poultry yards.

Time and credit to be arranged.

Assistant Professor Alder.

ART

Professor Calvin Fletcher.
Assistant Professor Braithwaite.

JUNIOR COLLEGE COURSES.

1. Nature Appreciation. Study of beauty in natural form with a view to its use in design. Fall quarter. Two credits.

Sec. 1, T. Th. S. 8:00. *Professor Fletcher.*
Sec. 2, M. W. F. 11:00. *Assistant Professor Braithwaite.*

2. Design. General principles of design in pattern and color, color theory, etc. Winter quarter. Two credits.

Sec. 1, T. Th. S. 8:00. *Professor Fletcher.*
Sec. 2, M. W. F. 11:00. *Assistant Professor Braithwaite.*

3. Art Survey and Appreciation. Art principles as applied to costume, interior decoration, painting, sculpture and architecture. Spring quarter. Two credits.

Sec. 1, T. Th. S. 8:00. *Professor Fletcher.*
Sec. 2, M. W. F. 11:00. *Assistant Professor Braithwaite.*

SENIOR COLLEGE COURSES.

114. History of Art. Spring quarter. Three credits.

T. Th. S. 11:00. *Professor Braithwaite.*

107. AESTHETICS. The essentials common to all the Fine Arts. The bases of sound judgment and appreciation of poetry, painting, music, sculpture, and architecture. Spring quarter.

(Not given 1922-23.) *Professor Fletcher.*

122. HOME FURNISHING. The principles of house and garden design, wall decoration, color, floor and ceiling treatment, furniture and wood finishing problems. Winter quarter. Four credits.

Lec. T. Th. S. 9:00; lab. Th. or F. 2:00 to 5:00.

Professor Fletcher.

123. HOME FURNISHING. Textiles and drapery, tableware, pottery, pictures, sculpture, flowers, etc., and the practical assembling of all features which go to make the house beautiful. Spring quarter.

Lec. T. Th. S. 9:00; lab. Th. or F. 2:00 to 5:00.

Professor Fletcher.

124. PERSPECTIVE THEORY. Three credits. Given only if ten students apply. Winter quarter.

M. W. F. 11:00. *Professor Fletcher.*

STUDIO COURSES

PROFESSOR FLETCHER.
ASSISTANT PROFESSOR BRAITHWAITE.

This work is conducted as individual laboratory work. Three hours work each week is required for each credit granted. Two, three or more credits may be registered for each quarter but not more than the maximum credit indicated will be granted any student.

JUNIOR COLLEGE COURSES.

4. DRAWING. Fundamental freehand from still life, simple casts and nature. Maximum 15 credits.
Any days, 2:00 to 5:00.

5. ELEMENTARY PAINTING. In water color or oil. Maximum 15 credits.
Any days, 2:00 to 5:00.

6. ELEMENTARY MODELING. From antique and nature. Maximum 9 credits.
Any days, 2:00 to 5:00.

7. GENERAL ILLUSTRATION FOR NEWSPAPERS, BOOKS AND MAGAZINES. Maximum 12 credits.
Any days, 2:00 to 5:00.

8. DESIGN for embroidery, weaving, laces, etc. Maximum 6 credits.
Any days, 2:00 to 5:00.

9. HISTORIC ORNAMENT. Egyptian, Assyrian, Greek, French and Renaissance may be studied. Maximum 9 credits.
Any days, 2:00 to 5:00.

10. SHOW CARD AND ELEMENTARY SIGN LETTERING. Maximum 12 credits.
Any days, 2:00 to 5:00, or T. Th. S. 10:00 a. m.

11. POTTERY. Elementary, including building, turning, glazing, firing, etc., such as may be taken up with a limited equipment. Maximum 2 credits.
Any days, 2:00 to 5:00.

12. China Painting. Elementary painting processes. Prerequisites, Art 1, 2, 3, or their equivalent. Maximum 6 credits.
Any days, 2:00 to 5:00 or T. Th. S. 10:00 to 1:00.

13. Copper Work. Simple exercises in sawing, raising and repousse. Maximum 6 credits.
Any days, 2:00 to 5:00, or T. Th. S. 10:00 to 1:00.

14. Leather Work. Elementary etching, dying, cutting and tooling in mats, purses, bags, etc. Maximum 4 credits.
T. Th. S. 10:00 to 1:00.
Any days, 2:00 to 5:00.

15. Basketry. Elementary processes in reed, raffia and grass. Maximum 9 credits.
Any days, 2:00 to 5:00, or T. Th. S. 10:00 to 1:00.

16. Enamelling. Work on glass, wood, ivory, etc. Maximum 6 credits.
Any days, 2:00 to 5:00, or T. Th. S. 10:00 to 1:00.

SENIOR COLLEGE COURSES.

106. Life Drawing From Draped Figure or Animals. Maximum 12 credits.
Any days, 2:00 to 5:00.

108. Advanced Painting in oil or water color. Maximum 30 credits.
Any days, 2:00 to 5:00.

109. Advanced Modelling from animals or live models.
Any days, 2:00 to 5:00.

110. ADVANCED ILLUSTRATION including newspaper work, costume magazine work, decorative and illumination work, poster and cartooning. Only one phase may be taken at a time. Maximum 12 credits.

Any days, 2:00 to 5:00.

111. PROFESSIONAL DESIGN for textiles, wall paper, interior decoration, furniture, etc. One line to be pursued at a time. Maximum 12 credits.

Any days, 2:00 to 5:00.

112. ADVANCED COSTUME DESIGN. Prerequisite, Textiles and Clothing 105 and 115. Maximum 6 credits.

Any days, 2:00 to 5:00.

113. ADVANCED SHOW CARD AND TECHNICAL SIGN WORK. Maximum 12 credits.

Any days, 2:00 to 5:00 or T. Th. S. 10:00 to 1:00.

114. FANCY LETTERING AND ILLUMINATION for memorials, documents, Christmas greetings, place cards, etc. Maximum 12 credits.

Any days, 2:00 to 5:00, or T. Th. S. 10:00 to 1:00.

115. ADVANCED CHINA DECORATION. Incrusted work, enamelling, lustre, etc., to be taken up. Prerequisite, Art 12 or its equivalent. Maximum 15 credits.

Any days, 2:00 to 5:00, or T. Th. S. 10:00 to 1:00.

116. ADVANCED ART METALRY. Maximum 18 credits.

Any days, 2:00 to 5:00.

117. JEWELRY. Sawing, wire work and filligree, some setting, enamelling, soldering, etc., will be taken up with broaches, rings, lavaliers, pins, chains, etc. Maximum 18 credits.

Any days, 2:00 to 5:00.

118. ADVANCED LEATHER WORK. Tooling, carving, mounting and finishing. Maximum 12 credits.

Any days, 2:00 to 5:00, or T. Th. S. 10:00 to 12:00.

112. ADVANCED WOOD ORNAMENTATION. Carving, inlay, scraffito, jesso, etc., may be pursued as an art expression. Maximum 18 credits.

Any days, 2:00 to 5:00.

For closely related courses see the following:

Household Administration 20 (History of Domestic Architecture). *Professor Fletcher.*

Textiles and Clothing 105 (History of Costume). *Professor Fletcher.*

Textiles and Clothing 115 (Costume Design). *Professor Fletcher.*

AUTO MECHANICS

ASSISTANT PROFESSOR A. H. POWELL.
MR. S. R. STOCK.
MR. LOUIS A. SHOOK.
MR. E. J. YONK.

VOCATIONAL COURSES.

a. AUTOMOBILE DESIGN AND CONSTRUCTION. A course for beginners. This course is a thorough study of the design, contruction and function of the various and unit parts of the auto-obile with special reference to gas engine principles and mechan-sm involved. Must be taken by all students who intend to spe-ialize in any branch of the automotive work and must be accom-anied by machine work and forging. Four credits.

Sec. 1, Fall quarter, M. W. F. 8:00 to 11:00.

Sec. 2, Spring quarter, T. Th. S. 8:00 to 11:00.

Mr. Shook.

b. AUTOMOBILE DESIGN AND CONSTRUCTION. A continua-ion of Auto Mechanics a. Also deals with the dismantling and ssembling of the automobile. Machine work and forging must e taken with this course. Four credits.

Sec. 1, Winter quarter, M. W. F. 8:00 to 11:00.

Sec. 2, Summer quarter, M. W. F. 8:00 to 11:00.

Mr. Shook.

c. AUTOMOBILE CARE AND MAINTAINANCE. Special. For Winter quarter students only. A special course to enable the student to care for and make minor repairs and adjustments on the automobile. Prerequisites, Auto Mechaniccs a, and b, or their equivalents. Winter quarter. Four credits.

T. Th. S. 8:00 to 11:00. *Mr. Shook.*

d. VULCANIZING AND TIRE REPAIR WORK. A thorough course in the repairing of casings and tubes including the building up of tire sections. This course is for men who wish to qualify to take charge of a tire repair shop. Winter quarter. Two credits.

T. Th. 2:00 to 5:00. *Mr. Shook.*

e. VULCANIZING AND TIRE REPAIR WORK. A continuation of Auto Mechanics d. Includes retreading and shop problems and equipment. Spring quarter. Two credits.

T. Th. 2:00 to 5:00. *Mr. Shook.*

f. GASOLINE TRACTION ENGINE DESIGN AND CONSTRUCTION. A complete course in the design, construction and function of various units and parts of the gas traction engine. For men who intend to specialize in tractor operation and repair. Machine work and forging must be taken with this course. Four credits.

Sec. 1, Fall quarter, M. W. F. 8:00 to 11:00.
Sec. 2, Spring quarter, T. Th. S. 8:00 to 11:00.

Mr. Yonk.

g. GASOLINE TRACTION ENGINE DESIGN AND CONSTRUCTION. A continuation of Auto Mechanics f. Includes minor repairs and adjustments, dismantling and reassembling of gas tractors. Machine work and forging must be taken with this course. Four credits.

Sec. 1. Winter quarter, M. W. F. 8:00 to 11:00.
Sec. 2, Summer quarter, T. Th. S. 8:00 to 11:00.

Mr. Yonk.

h. GASOLINE TRACTION ENGINE OPERATION AND REPAIRS. Special. For Winter quarter students only. Offered for men who wish to qualify to do their own minor repairs, adjustments and operation. Special attention will be given to the methods of tractor overhauling and repairing on the farm. Winter quarter. Four credits.

T. Th. S. 8:00 to 11:00. *Mr. Yonk.*

i. GASOLINE ENGINE CARBURETION AND CARBURETORS. Internal combustion engine fuels and a thorough treatise on the principles of carburetion, the construction of carburetors and their relation to successful gas engine operation. Winter quarter. Two credits.

T. Th. 2:00 to 5:00. *Mr. Yonk.*

IGNITION, STARTING AND LIGHTING.

Six hours forging and eleven hours machine work required of all men specializing in Ignition.

j. Elements of Electricity and Magnetism. A study of magnets and magnetism, elementary principles of electricity and the laws governing them and their application to coils, batteries, wiring and simple ignition devices. Required of all specializing in ignition, starting and lighting. Four credits.

Sec. 1, Fall quarter, T. Th. S. 8:00 to 11:00.
Sec. 2, Spring quarter, M. W. F. 2:00 to 5:00.
Mr. Stock.

k. Storage Batteries. A complete study of the construction, chemical action, proper care and handling, testing, charging and rebuilding of the storage battery. Prerequisite, Auto Mechanics j or its equivalent. Winter quarter. Four credits.

T. Th. S. 8:00 to 11:00. *Mr. Stock.*

l. Ignition, Starting and Lighting. Special for Winter course students. A study of the various starting, lighting and ignition systems, their operation, care and maintenance. Systematic location of common ignition trouble and minor repairs. Winter quarter. Four credits.

M. W. F. 2:00 to 5:00. *Mr. Stock.*

m. Ignition Trouble Work. The systematic location of trouble, service work, adjusting and minor repairs. Summer quarter. Four credits.

M. W. F. 2:00 to 5:00. *Mr. Stock.*

n. Oxy-Acetylene Welding. The oxy-acetylene welding process, equipment and gases, the properties of various metals etc. Practice in welding cast iron, steel, aluminum and other metals. A special fee of $25.00 is required of all studnets taking Oxy-Acetylene Welding. Winter quarter. Four credits.

Sec. 1, T. Th. S. 8:00 to 11:00.
Sec. 2, M. W. F. 2:00 to 5:00.

Assistant Professor Powell.

JUNIOR COLLEGE COURSES.

1. Automobile Repair. For students who wish to specialize in automobile repairing and general garage practice. This course deals with the replacing of worn parts and all ordinary shop repairs. Pre-requisites, Auto Mechanics a and b. Machine work and forging must be taken with this course. Four credits.

Sec. 1, Fall quarter, M. W. F. 2:00 to 5:00.
Sec. 2, Spring quarter, M. W. F. 8:00 to 11:00.

Mr. Shook.

2. Automobile Repair. A continuation of Auto Mechanics 1. Includes analyzing and repairing of troubles commonly found in the automobile. Four credits.

Sec. 1, Winter quarter, M. W. F. 2:00 to 5:00.
Sec. 2, Summer quarter, M. W. F. 8:00 to 11:00.

Mr. Shook

4. Gas Tractor Overhauling. The overhauling of the tractor, including babbitting of bearings, fitting of new parts and the operation of the tractor. Prerequisites, Auto Mechanics f, and g. Four credits.

Sec. 1, Fall quarter, M. W. F. 8:00 to 11:00.
Sec. 2, Spring quarter, M. W. F. 8:00 to 11:00.

Mr. Yonk

5. Gas Tractor Repair. A continuation of Auto Mechanics 4. Includes trouble work and operating the tractor under load. Prerequisite, Auto Mechanics 4.

Sec. 1, Winter quarter, M. W. F. 2:00 to 5:00.
Sec. 2, Summer quarter, M. W. F. 2:00 to 5:00.

Mr. Yonk.

7. Storage Batteries. The electrical chemistry of the automobile storage battery, testing of batteries, rebuilding batteries, charging and general care. Prerequisite, Auto Mechanics j, or its equivalent. Fall quarter. Four credits.

M. W. F. 2:00 to 5:00. *Mr. Stock.*

8. High Tension Magnetos and Battery Ignition System. A complete study of all types of magnetos, their operation, design and construction, spark plugs, testing, selection of proper plugs, magneto and battery ignition system, trouble shooting and repair. Prerequisite, Auto Mechanics j, or its equivalent. Four credits.

Sec. 1, Fall quarter, M. W. F. 8:00 to 11:00.
Sec. 2, Spring quarter, T. Th. S. 8:00 to 11:00.

Mr. Stock.

9. Starting and Lighting Systems. A complete study of the modern starting and lighting systems, their operation, design and construction; voltage regulation, relays, third brush regulation; operating and adjusting of regulating devices; automatic battery cut-out, purpose and operation; reading of wiring diagrams and practice wiring. Pre-requisites, Auto Mechanics j and 8. Four credits.

Sec. 1, Winter quarter, M. W. F. 8:00 to 11:00.
Sec. 2, Summer quarter, T. Th. S. 8:00 to 11.00.

Mr. Stock.

10. Oxy-Acetylene Welding and Electric Welding. An elementary course in metallurgy and the use and application of the oxy-acetylene flame for welding in the industrial field. Includes practice in welding cast iron, various kinds of steel, aluminum and bronze. Spring quarter. Four credits.

T. Th. S. 8:00 to 11:00. *Assistant Professor Powell.*

SENIOR COLLEGE COURSES.

110. Motor and Generator Repair. A thorough study of generators and starting motors, their construction, operation and repair, including trouble work; armature and field testing; a systematic location and repair of all troubles encountered with the modern starting, lighting and ignition systems. Prerequisite, Auto Mechanics 9. Spring quarter. Four credits.

M. W. F. 8:00 to 11:00. *Mr. Stock.*

103. Automobile Repair. A continuation of Auto Mechanics 2. Includes shop methods and equipment. Prerequisites, Auto Mechanics 1 and 2. Four credits.

Sec. 1, Fall quarter, T. Th. S. 8:00 to 11:00.
Sec. 2, Spring quarter, M. W. F. 2:00 to 5:00.
Mr. Shook.

106. Tractor Repair and Operation. An advanced course for men who wish to specialize in tractor service work, field work and operating problems. Prerequisites, Auto Mechanics 4 and 5. Four credits.

Sec. 1, Fall quarter, T. Th. S. 8:00 to 11:00.
Sec. 2, Spring quarter, M. W. F. 2:00 to 5:00.
Mr. Yonk.

BACTERIOLOGY AND PHYSIOLOGICAL CHEMISTRY

Professor Greaves.
Assistant Professor Carter.
Mr. ....

VOCATIONAL COURSE.

a. An elementary course dealing with bacteria in relation to soils, air, food and water. (Given if called for by ten students.) Winter quarter. Three credits.

M. W. F. 9:00. *Professor Greaves.*

JUNIOR COLLEGE COURSES.

1. General Bacteriology. Biology and significance of bacteria. The general phases of soil, air, food, water and disease are considered. Breakage deposit, $2.50. Fall quarter. Five credits.

Lec. M. W. F. 11:00; lab. W. F. 2:00 to 5:00.
Professor Greaves and Assistant Professor Carter.

2. General Bacteriology. Biology and significance of bacteria. The subjects of air, water, milk food, and disease are considered. Breakage deposit, $2.50. Winter quarter. Five credits.

Lec. T. Th. S. 9:00; lab. W. F. 2:00 to 5:00.
Professor Greaves and Assistant Professor Carter.

3. Pathogenic Bacteriology. The pathogenic bacteria are considered in relation to specific diseases, especially with regard to immunity. Prerequisite, Bacteriology 1 or 2. Breakage deposit, $2.50. Winter quarter. Five credits.

Lec. M. W. F. 10:00; lab. W. F. 2:00 to 5:00.
Professor Greaves.

14. School Sanitation. Sanitary problems confronting the teacher in rural and urban schools. Prerequisite, Bacteriology 1 or 2.

(Not given 1922-23.)

SENIOR COLLEGE COURSES.

102. Soil Bacteriology. Bacteria considered in relation to soil fertility. Prerequisite, Bacteriology 1. Fall quarter. Three credits.

M. W. F. 8:00. *Professor Greaves.*

103. Soil Bacteriology. Methods used in bacteriological investigations. Should accompany Bacteriology 102. Prerequisite, Bacteriology 1. Breakage deposit, $2.50. Fall quarter. Three credits.

W. F. 2:00 to 5:00. *Professor Greaves.*

104. Dairy Bacteriology (lecture). The bacteria of milk, butter and cheese. Prerequisite, Bacteriology 1. Winter quarter. Two credits.

T. Th. 8:00. *Assistant Professor Carter.*

105. Dairy Bacteriology (laboratory). Methods used in the bacteriological examination of milk and dairy products. Should accompany Bacteriology 104. Prerequisite, Bacteriology 1. Breakage deposit, $2.50. Winter quarter. Two credits.

T. Th. 2:00 to 5:00. *Assistant Professor Carter.*

106. Sanitary Analysis. Methods used by the sanitary inspector in examining water, milk and other foods. Prerequisites, Chemistry 6 and Bacteriology 1 or 2.

Time and credit to be arranged. *Professor Greaves.*

108, 109. SANITATION. Principles of sanitation; nature of disease, its spread and means of prevention; sanitary arrangement and construction of farm buildings. The sanitation of the school will be given special consideration. Prerequisite, Bacteriology 1 or 2. Winter and Spring quarters. Three credits each quarter.
M. W. F. 11:00. *Professor Greaves.*

110. SANITARY STATISTICS. Vital statistics showing the effect of sanitary precautions upon health in cities and rural communities. Prerequisites, Bacteriology 1 or 2 and 108. Fall quarter. Two credits.
(Not given 1922-23.) *Assistant Professor Carter.*

111. PHYSIOLOGICAL CHEMISTRY. The transformation going on in the plant and animal. Prerequisites, Chemistry 21 and 22. Spring quarter.
Daily except Saturdays 9:00. *Professor Greaves.*

112. PHYSIOLOGICAL CHEMISTRY. A laboratory course which may accompany Bacteriology 111. Breakage deposit, $2.50. Spring quarter. Two credits.
W. F. 2:00 to 5:00. *Assistant Professor Carter.*

113, 114, 115. ADVANCED BIOCHEMISTRY. A study of the chemical transformations going on in the animal. Prerequisite, Bacteriology 111. Fall, Winter and Spring quarters. Two credits each quarter.
T. Th. 11:00. *Professor Greaves.*

116. ADVANCED BIOCHEMISTRY. Bacteriological and chemical methods used in the diagnosing of disease.
(Not given 1922-23.)

GRADUATE COURSE.

207. Research. The laboratory and library facilities are especially arranged for advanced students in bacteriological investigations in agriculture, household science, the industries, sanitary science and veterinary science.

Time and credit to be arranged.

Professor Greaves and Assistant Professor Carter.

BOTANY

Professor George R. Hill, Jr.
Associate Professor Richards.
Mr. Nuffer.

Courses 21, 22, 23, 101, 110, 111, 120, 121 and 131, required of students majoring in Botany.

VOCATIONAL COURSE.

b. Elementary Plant Pathology. Plant diseases of Utah; their nature, cause, and control. For practical course students. Winter quarter. Three credits.

Lec. S. 12:00; lab. F. 2:00 to 5:00.

Associate Professor Richards.
Mr. ....

JUNIOR COLLEGE COURSES.

1. General Botany. A brief survey of the field of plant life; the nature and development of plants; plant parts and their function; the food of plants; the relation of plants to human needs; noteworthy wild and cultivated plants. Five credits.

Sec. 1, Fall quarter. Lec. M. W. F. 9:00; lab. T. Th. 2:00 to 5:00.

Sec. 2, Spring quarter. Lec. M. W. F. 9:00; lab. T. Th. or W. F. 2:00 to 5:00.

Associate Professor Richards.
Mr. ....

21. General Agricultural Botany. Plant physiology, anatomy, morphology and classification. Plant physiology in relation to crop production is the basis of this course. Designed especially for students in agriculture. Required for a major or minor in Botany. Prerequisite or parallel, Chemistry 1, 2. Fall quarter. Five credits.

Lec. Sec. 1, M. W. F. 8:00; Sec. 2, T. Th. S. 8:00; lab. M. or W. and Th. or F.

Professor Hill.
Mr. Nuffer.

22*. A continuation of course 21. Winter quarter. Five credits. *Professor Hill and Mr. Nuffer.*

23*. A continuation of course 22. Spring quarter. Five credits. *Professor Hill and Mr. Nuffer.*

*Students may register for Botany 22 and Botany 23 without Botany 21 only by permission.

SENIOR COLLEGE COURSES.

101. Flowering Plants. Our common plants and their systematic relationship; special emphasis given to economic plants. Two lectures and one, two or three laboratory periods. Prere-

quisite, Botany 1 or 21. Spring quarter. Three, four, or five credits.

Lec. Th. S. 10:00; lab. T. 2:00 to 5:00 and any other afternoon.
Mr. Nuffer.

102. A Continuation of Course 101, extending through the summer. A consideration of the general summer flora or of particular families and their distribution. A laboratory course. Prerequisite, Botany 101. Two to five credits, according to work done.
Mr. Nuffer.

111. Morphology.

Not given in 1922-23.

116. Materials and Methods in Botanical Technic. Collections and preservations of botanical specimens. Preparation of botanical materials and slides for class room study and exhibition purposes. Designed particularly for teachers of Botany. Prerequisite, Botany 1 or 21. A laboratory course. Any quarter. Two to five credits.
Associate Professor Richards.

119. Dendrology. Structure and properties of wood; economic woods, their identification and uses. Prerequisites, Botany 1 or 21, 22, and 23. Physics 1 should also precede the course. One lecture and one laboratory period. Winter quarter. Two credits.

Time to be arranged.
Professor Hill

120. Plant Physiology. An advanced course dealin with the water relations of plants; absorption, metabolism an growth and factors affecting it. Prerequisites, Botany 21, 22, an 23. Three to five credits.
Professor Hill

126. ECOLOGY. The distribution and adaptation of plants, as affected by the environmental factors. Spring quarter. Three credits.

T. Th. S. 9:00. *Professor Hill.*

130. PLANT PATHOLOGY. The history, nature, cause and control of field and truck crop diseases. Prerequisites, Botany 1, or 21, 22, 23. Fall quarter. Four credits.

Lec. M. F. 10:00; lab. M. F. 2:00 to 5:00.

Associate Professor Richards.

131. A continuation of course 130. Orchard and small fruit diseases. Winter quarter. Four credits.

Associate Professor Richards.

135. MYCOLOGY. Morphology and the taxonomic relations of fungi with special emphasis on economic forms. Prerequisites, Botany 1, or 21, 22, 23. Winter quarter. Four credits.

Lec. T. Th. 11:00; lab. T. Th. 2:00 to 5:00.

Not given 1922-23. *Associate Professor Richards.*

136. MYCOLOGY. A continuation of course 135. Spring quarter. Four credits. *Associate Professor Richards.*

139. PATHOLOGICAL TECHNIC. Designed especially for students who wish to do advanced work in Plant Pathology and related subjects. One lecture and two laboratory periods. Prerequisite, Botany 130. Winter or Spring quarter. Three credits.

Time to be arranged. *Associate Professor Richards.*

140, 141, 142. SEMINAR. Current literature in the field of botany. One hour a week. Fall, Winter and Spring quarters. One credit each quarter.

Time to be arranged.

Professor Hill and Associate Professor Richards.

143. Research. Open to all qualified Senior College students.

Time and credit to be arranged.

Professor Hill and Associate Professor Richards.

BUSINESS ADMINISTRATION

Professor Wanlass.
Professor P. E. Peterson.
Professor Harris.
Assistant Professor Thain.
Assistant Professor Hardy.

VOCATIONAL COURSE.

a. Economics of Business. An elementary course dealing with the principles of economics, particularly as they apply to the organization, financing and managing of business enterprises. Fall quarter. Three credits.

M. W. F. 9:00. *Assistant Professor Thain.*

JUNIOR COLLEGE COURSES.

1, 2. Principles of Business. An introductory course in which the fundamental principles underlying the organization, financing and managing of business institutions are studied. A survey of the whole field of business activity is made, preparatory to more intensive study in the advanced courses in this department. Fal and Winter quarters. Three credits each quarter.

M. W. F. 10:00. *Professor Wanlass.*

3. Credits and Collections. After a study of the nature and importance of credit in the modern business world, careful attention will be given to the practical work of the credit man and credit department. Consideration will also be given to credit institutions, credit forms, statements, methods of collection and legal remedies. Prerequisites, Economics 1, 2, 3, and Business Administration 1, 2. Spring quarter. Three credits.

M. W. F. 10:00. *Professor Wanlass.*

SENIOR COLLEGE COURSES.

101. Approach to Business Problems. This course aims to such a classification of business activities as to provide the student of business with a scientific method of approach to the solution of business problems in whatever form they may arise and to illustrate the application of this method to typical cases. It is intended to serve as a guide to the study of the more specific problems of factory, retail store, and sales management. Fall quarter. Three credits.

M. W. F. 2:00. *Professor Peterson.*

104. Business Finance. Various types of business organizations will be considered and attention will be given to the methods of providing capital and managing the current finances. Special consideration given to the financing of small rural enterprises. Prerequisites, Economics 1, 2, 3, or 120, 121, and Business Administration 1, 2. Fall quarter. Three credits.

M. W. F. 9:00. *Professor Harris.*

106. Modern Scientific Management. A careful study will be made of the principles and the advantages and disadvantages of scientific management. Prerequisites, Economics 1, 2, 3 or 120, 121, and Business Administration 1, 2. This course alternates with Retail Store Problems. (See Marketing 131, 132.)

(Not given 1922-23.)

107. Labor Management. Labor problems studied from the standpoint of the employer. Special consideration given to the principles of executive control, hours of work, working conditions and various methods of attaining greater efficiency. Prerequisites, Economics 1, 2, 3 or 120, 121, and Business Administration 1, 2. Spring quarter. Three credits.

M. W. F. 8:00. *Assistant Professor Hardy.*

111. Business and Agricultural Statistics. Consideration will be given to the meaning and application of statistics, statistical methods, sources of statistical information and the formulation of business barometers. Prerequisites, Economics 1, 2, 3, or 120, 121 and Business Administration 1, 2. Alternates with Business Administration 113. Three credits.

(Not given 1922-23.) *Professor Wanlass.*

112. Investments. This course takes up a study of the different classes of securities on the market from the standpoint of their desirability as an investment. Analysis of the factors of safety. Determination of the income yield. Type of investment suitable for the different classes of investors. Students should complete Mathematics 61 before taking this course. Spring quarter. Three credits.

T. Th. S. 8:00. *Assistant Professor Thain.*

113. Business Forecasting. The uncertainty which now attends the outcome of business undertakings constitutes the principal defect of the modern business system. In recent years, science has been applied to this field. There is now a great body of material which if properly understood and used, would be of inestimable value in forecasting business conditions. The aim of this course will be to acquaint students with principles of business

forecasting, the business cycle and the various business barometers. Prerequisites, Economics 1, 2, 3 or 120, 121, and Business Administration 1, 2. Alternates with Business Administration 111. Spring quarter. Three credits.

T. Th. S. 8:00. *Professor Wanlass.*

For closely related course see:

INSURANCE AND INSURANCE ACCOUNTING. (Accounting 151.) *Professor Peterson.*

CHEMISTRY

PROFESSOR R. L. HILL.
PROFESSOR F. L. WEST.
ASSISTANT PROFESSOR HIRST.
ASSISTANT PROFESSOR MAESER.

Students who major in Chemistry are required to take courses 103, 105 and either 110 or 113 or 114.

JUNIOR COLLEGE COURSES.

1, 2. INORGANIC CHEMISTRY. The properties and preparation of the elements and their ordinary compounds. The quantitative laws of chemical combination and their applications. The effects of temperature and concentration in displacing chemical equilibria. Five credits each quarter.

Sec. 1, Fall and Winter quarters.

Lec. T. Th. S. 8:00; lab. M. W. 2:00 to 5:00.

Professor Hill.

Sec. 2, Winter and Spring quarters.

Lec. M. W. F. 9:00; M. F. 2:00 to 5:00.

Professor Hill.

Sec. 3, Winter and Spring quarters.
Lec. M. W. F. 11:00; lab. T. Th. 2:00 to 5:00.
Assistant Professor Maeser.

3, 4, 5. INORGANIC CHEMISTRY. A more advanced course in inorganic chemistry. Prerequisites, high school chemistry or physics. Fall, Winter and Spring quarters. Five credits each quarter.

Lec. T. Th. S. 9:00; lab. W. F. 2:00 to 5:00.
Assistant Professor Maeser.

14, 15. QUALITATIVE ANALYSIS. A course in the theory and practice of inorganic qualitative analysis. Prerequisite, Chemistry 1, 2. Winter and Spring quarters. Three credits each quarter.

Lec. T. 2:00; lab. T. 3:00 to 5:00; Th. F. 2:00 to 5:00.
Assistant Professor Hirst.

21, 22. ORGANIC CHEMISTRY. Fundamental principles of organic chemistry. The chemistry of the carbon compounds. Special attention will be paid to the chemistry of proteins, carbohydrates and fats. Prerequisite, Chemistry 1, 2. Fall and Winter quarters. Four credits each quarter.

Lec. M. W. F. 10:00; lab. W. or Th. 2:00 to 5:00.
Professor Hill.

23. ORGANIC CHEMISTRY. A laboratory course in organic chemistry designed for students desiring more laboratory work than is given in Chemistry 21, 22. Fall or Winter quarter. One to two credits according to the registration.

Lab. W. Th. 2:00 to 5:00. *Professor Hill.*

SENIOR COLLEGE COURSES.

102, 103. Quantitative Analysis. A course in the theory and application of the fundamental principles of gravimetric and volumetric analysis to inorganic, agricultural and food analysis. Prerequisites, Chemistry 1, 14 and 15. Winter and Spring quarters. Three credits each quarter.

Lec. Th. 2:00; lab. Th. 3:00 to 5:00; T. F. 2:00 to 5:00.

Assistant Professor Hirst.

104. Special Course in Quantitative Analysis. Prerequisite, Chemistry 102 and 103.

Time and credit to be arranged with the instructor.

a. Water analysis.
b. Food analysis.
c. Soil analysis.
d. Urine analysis.
e. Gas analysis.

Professor R. L. Hill and Assistant Professor Hirst.

105, 106. Physical Chemistry. The kinetic theory, soluions, thermo-chemistry and electro-chemistry. Prerequisites, Chemistry 1, 2 and Physics 1, 2, 3. Fall and Winter quarters. Three credits each quarter.

(Not given 1922-23.)

108. Industrial Chemistry. The application of chemistry in the manufacture and uses of various substances, such as ements, fertilizers, gases, explosives, paints, pigments, soaps, ugar, starch, paper, potash, salt, sulphuric acid and in the smelting of ores will be studied. Arrangements will be made for the lass to visit the leading industrial plants of the State. Three ectures and thirty-six hours of field work visiting industrial lants. Winter quarter. Four credits.

Lec. T. Th. S. 9:00; field work to be arranged with class.

(Given if elected by ten students.) *Professor Hill.*

109. CHEMISTRY OF TEXTILES. Chemical methods for the identification and estimation of the textile fibres, including complete quantitative determination of coton, wool, silk and linen substances in fabrics; chemistry of dyeing and bleaching. Prerequisites, Chemistry 3, 4, 5; Textiles and Clothing 20, 21. Spring quarter. Three credits.

Time to be arranged. *Professor Hill.*

113. GENERAL ORGANIC REACTION. The more important reactions employed in synthetic organic chemistry. Prerequisite Chemistry 21, 22 or equivalent. Spring quarter. Three credits

M. W. F. 10:00. *Professor Hill*

114. THE NITROGEN COMPOUNDS. A course devoted pri marily to the proteins, alkaloids and purine derivatives. Prere quisite, Chemistry 21, 22. Winter quarter. Three credits.

Hours to be arranged. *Assistant Professor Hirs*

115. ORGANIC PREPARATIONS. An advanced laborator course in practical laboratory methods of synthetic organic chen istry. Prerequisites, Chemistry 21, 22 and 102, 103. Fall Winter quarter. Three credits.

Time to be arranged. *Assistant Professor Maese*

117, 118, 119. HISTORY OF CHEMISTRY. Fall, Winter a Spring quarters. Two credits each quarter.

(Not given in 1922-23.)

180. RESEARCH. Senior students specializing in chemist may elect research in any branch of the subject.

Time and credit to be arranged with the instructor.

Professor R. L. H

For closely related course see Bacteriology 111.

DAIRY HUSBANDRY

Professor George B. Caine.
Associate Professor Wilster.

JUNIOR COLLEGE COURSES.

1. Elements of Dairying. The secretion and composiion of milk; the chemical and physical properties of milk; testng milk and cream for fat and adulterants; dairy sanitation, seppration; pasteurization; making of butter, cheese and ice cream; ood value of milk and milk products. Course completed in one uarter. Students should provide themselves with white aprons r white suits. Four credits.

Fall quarter, Lec. M. W. F. 8:00; lab. W. 2:00 to 5:00.
Winter quarter, Lec. M. W. F. 9:00; lab. T. 2:00 to 5:00.
Associate Professor Wilster.

2. Market Milk. The production of sanitary milk; handng of milk at city milk plants; inspection methods; marketing of ilk. Winter quarter. Two credits.

T. Th. 9:00. *Associate Professor Wilster.*

3. Dairy Technology. The manufacture of dried and conensed milk, milk sugar, casein, fermented milk, oleomargarine, novated butter; preparation of various milk drinks. Spring arter. Three credits.

Lec. M. W. 11:00; one laboratory, hours to be arranged.
Associate Professor Wilster.

4. Ice Cream and Ices. The manufacture of standard nds of ice creams and ices. Prerequisite, Dairy Husbandry 1. ring quarter. Three credits.

Lec. T. Th. 9:00; lab. T. 2:00 to 5:00.
Associate Professor Wilster.

5. Dairy Engineering. A study of the machines used in the various dairy plants, such as boilers, engines, motors, refrigerating machines, separators, pasteurizers, freezers and churns. Fall quarter. Two credits.

Lec. T. Th. 11:00. *Associate Professor Wilster.*

6. Dairy Arithmetic. Problems in testing and standardizing, figuring overrun, figuring cost of manufacturing and marketing of dairy products. Fall quarter. One credit.

Lec. F. Th. 10:00. *Associate Professor Wilster.*

7. Varieties of Cheese. The manufacture of standard kinds of soft cheese and some foreign and domestic varieties such as Edam, Brick, Limburger. Fall quarter. Two credits.

Lec. M. 11:00; lab. M. 2:00 to 5:00.

Associate Professor Wilster.

SENIOR COLLEGE COURSES.

101. Testing and Inspection. Commercial testing of the various dairy products. Methods of inspection. Prerequisite, Dairy Husbandry 1. Spring quarter. Two credits.

Lec. T. 11:00; lab. W. 2:00 to 5:00.

Associate Professor Wilster.

102. Judging Dairy Products. Judging milk, butter, cheese, ice cream and condensed milk. Winter quarter. One credit.

T. 11:00. *Associate Professor Wilster.*

103. Buttermaking. The manufacture of creamery butter. Designed to meet the needs of the creameryman. Prerequisite or parallel, Dairy Husbandry 1. Winter quarter. Five credits.

Lec. M. W. F. 8:00; lab. F. 2:00 to 5:00 and S. 8:00 to 11:00

Associate Professor Wilster

104. CHEDDAR CHEESE-MAKING. Manufacturing and curing of American cheddar cheese. Prerequisite or parallel, Dairy Husbandry 1. Fall quarter. Four credits.

Lec. M. W. 10:00; lab. T. 12:00 to 5:00 and one hour to be arranged. *Associate Professor Wilster.*

105. MANAGEMENT OF DAIRY PLANTS. Organization and construction of dairy plants; efficient methods in the manufacture of dairy products; marketing; profit obtained; advertising; accounting. Each student will keep the Dairy Department books for one month. Prerequisite, Dairy Husbandry 1. Spring quarter. Five credits.

Lec. M. T. W. Th. 8:00; one three hour lab.

Time to be arranged. *Associate Professor Wilster.*

110. DAIRY PRODUCTION. A brief review of dairy breeds, ways of starting dairy herds, systems of herd records, calf feeding and management, dairy herd feeding, housing, and management. Laboratory exercises in judging, fitting for show, official testing, calf feeding, etc., time to be arranged. Spring quarter. Six credits.

Daily, except Saturday, 10:00. *Professor Caine.*

115. DAIRY SEMINAR. Discussions and reports of current literature. Time and credit to be arranged.

Professor Caine and Associate Professor Wilster.

116. RESEARCH. For advanced students.

Time and credit to be arranged.

Professor Caine and Associate Professor Wilster.

106. BUTTER-MAKING LABORATORY. For advanced students desiring additional practice in buttermaking. Any quarter.

Time and credit to be arranged.

Associate Professor Wilster.

107, 108. Cheesemaking Laboratory. For advanced students desiring additional practice in cheesemaking. Winter and Spring quarters.

Time and credit to be arranged.

Associate Professor Wilster.

ECONOMICS

Professor Harris.
Professor Wanlass.
Assistant Professor Hardy.

VOCATIONAL COURSES.

a. Economics. An introductory course giving a practical knowledge of the factors that underly the production and distribution of economic goods. Rent, wages, interest profit, money, wealth and wages will be studied. Fall quarter. Repeated in Winter quarter. Three credits.

M. W. F. 8:00. *Assistant Professor Hardy.*

JUNIOR COLLEGE COURSES.

1, 2, 3. General Economics. After a brief survey of man's economic development, a careful study is made of those fundamental laws and principles that govern our modern economic life. Some attention is also given to present economic problems preparatory to a more intensive study in the advanced courses in this department. Fall, Winter and Spring quarters. Three credits each quarter.

Sec. 1, M. W. F. 8:00. *Professor Wanlass.*
Sec. 2, M. W. F. 11:00. *Professor Harris.*

10. Current Economic and Political Problems. One great handicap of most college students is that they have never learned to read the newspapers and periodicals intelligently and critically. Many do not read them at all. The consequent inability to correlate college work with the world of affairs greatly diminishes the value of a college education. The aim of this course will be to assist students to read intelligently. Extensive reading of current newspapers and magazines will constitute the basis for class discussions. Fall quarter. Three credits.
T. Th. S. 8:00. *Professor Wanlass.*

30, 31. Economic Development of the United States. This course indicates the dominance of economic forces in history. A critical study will be made of the evolution and progress of American agriculture, industry, commerce, transportation, banking, labor organizations, etc., from the colonial to the present time. Graphs and charts will be made and special reports given. Winter and Spring quarters. Three credits each quarter.
T. Th. S. 8:00. *Professor Harris.*

SENIOR COLLEGE COURSES.

110. Commerce and Commercial Policies. Attention given to the fundamentals of trade and commerce, to the methods of increasing, limiting and directing American trade and commercial policies. Prerequisites, Economics 1, 2, 3, or 120, 121. Fall quarter. Three credits.
M. W. F. 10:00. *Professor Harris.*

120, 121. General Economics. A comprehensive study of the fundamentals of economic theory. Prerequisite, High School Economics or Senior College standing. Winter and Spring quarters.
T. Th. S. 10:00. *Professor Harris.*

125. Labor Problems. Study of the labor situation from the social point of view. Special attention given to labor problems and methods of securing industrial peace. Prerequisites, Economics 1, 2, 3, or 120, 121. Spring quarter. Three credits.
Not given 1922-23. *Assistant Professor Hardy.*

150. Principles of Taxation. After a brief survey of the fundamental economic principles of public finance, a critical examination of our federal, state and local tax systems will be made. The tariff, the general property tax, the income tax and the various business taxes will be studied. Special attention will be given to tax problems in Utah. Prerequisites, Economics 1, 2, 3, or 120, 121. Winter quarter. Three credits.
T. Th. S. 11:00. *Professor Wanlass.*

160. Money and Credit. The nature, development and uses of money and credit. Special attention given to bimetalism, the gold standard, the money market and the relation of money and credit to prices. Prerequisites, Economics 1, 2, 3, or 120, 121. Spring quarter. Three credits.
M. W. F. 9:00. *Professor Harris.*

167. Banking. After a brief survey of the development of banking in foreign countries and in the United States, our present banking organization and practices will be critically studied. Special attention given to the Federal Reserve System. Prerequisites, Economics 1, 2, 3 or 120, 121. Winter quarter. Three credits.
M. W. F. 9:00. *Professor Harris.*

168. Banking Practice. A technical course treating of the internal problems of bank organization. The emphasis is placed not upon the routine of bank operation, but upon the

larger problems of management, not upon clerical work, but upon work of official responsibility. Banking technic will be studied from the standpoint of functions, rather than from that of bank departments. Prerequisite, Economics 67. Spring quarter. Three credits.

(Not given 1922-23.) *Professor Harris.*

180, 181, 182. CURRENT ECONOMIC PROBLEMS. (Economic Seminar.) A reading and research course designed for senior and graduate students who are majoring in economics and related subjects. Special reports on current economic problems and literature will be made. Required of students graduating in economics. Fall, Winter and Spring quarters. One credit each quarter.

Alternating Thursday evenings, 7:30. *The Department.*

190. RESEARCH IN ECONOMICS. Special investigations in problems of economics may be carried on by senior and graduate students. Credit will be granted according to work done.

Time to be arranged. *Professor Harris.*

For courses in other departments closely associated with these see

Agricultural Economics 105. (Rural Credits.)
Agricultural Economics 101. (Rural Economics.)
Agricultural Economics 206. (Land Economy.)

See also Departments of Marketing and Business Administration.

EDUCATION AND PEDAGOGY

Professor Henry Peterson.
Professor Fletcher.
Professor Evans.
Assistant Professor Jensen.
Assistant Professor Oberhansley.
Assistant Professor Kewly.
Assistant Professor Braithwaite.
Miss Bowen.

VOCATIONAL COURSE.

a. Junior Extension Leadership. This course includes one week's intensive training at the Agricultural College in project leadership. Each person registered must lead a standard club of at least five members all registered in the same project until the project is completed. The field work will be done under the supervision of the Extension Division Staff, and regular reports will be required. From two to four quarter hours credit will be given, depending on the nature, quality and amount of work done. The student must register in advance for the work for which credit is given.

Professor Evans.

JUNIOR COLLEGE COURSES.

1. Introductory Psychology. An elementary study of mental processes to enable students the better to direct their educational careers in college and to grasp in a general way the psychology of business, trade and profession. Course repeats Spring quarter. Three credits.

Sec. 1, Fall quarter, M. W. F. 8:00.
Sec. 3, Spring quarter, T. Th. S. 9:00.

Professor Peterson

2. EDUCATIONAL PSYCHOLOGY. Designed especially for Sophomores who are preparing to teach in the elementary schools. This course applies the principles of psychology to the teaching process and to other aspects of social leadership. Prerequisite, Education 1. Winter quarter. Three credits. Time to be arranged.

Professor Peterson.

10, 11. PHYSICAL DEVELOPMENT. How to keep physically fit. The close correlation between mental fitness and physical fitness. A lecture course. Winter and Spring quarters. Two credits each quarter.

T. Th. 8:00. *Assistant Professor Jensen.*

21. SCOUTMASTERSHIP. A course in the organization, management and leadership of the Boy Scout troop. First aid, signalling, handicraft, camping, athletics and games, stories, trees, birds, rocks, stars, etc., the problems and aims of the Boy Scout movement. One lecture and one laboratory period. Hikes will be arranged. Spring quarter. Two credits.

Lec. T. S. 11:00.

Committee in charge: Professors George R. Hill, Jr., Richards, Fletcher, Henry Peterson, William Peterson, Jensen.

31. HISTORY OF EDUCATION. The evolution of education in ancient Greece and Rome. A study of their ideals and processes. Fall quarter. Three credits.

M. W. F. 10:00. *Professor Peterson.*

32. HISTORY OF EDUCATION. The rise and growth of Christianity with its schools and systems of education in Europe down to modern times. Winter quarter. Three credits.

M. W. F. 10:00. *Professor Peterson.*

33. HISTORY OF EDUCATION. European education transplanted and gradually adapted to American conditions and to democracy. The growth and development of American education to the present. Education 31 and 32 sugggested as a preparation for this course. Spring quarter. Three credits.
M. W. F. 10:00. *Professor Peterson.*

41. PRIMARY METHODS. The spontaneous purposeful activity of the child as the basic principle determining method. Subject matter viewed in the light of the foregoing theses. Significance to teachers of the fact of individual differences. Consideration of school room equipment, organization and play activity. Fall quarter. Three credits.
T. Th. S. 8:00. *Miss Bowen.*

51. EDUCATIONAL ART FOR GRADED SCHOOLS. Survey of design and color as applied to costume, posters, interior decoration and hand work in the Public Schools. The problem of teaching art in the grades. Winter quarter.
M. W. F. 11:00. *Assistant Professor Braithwaite.*

SENIOR COLLEGE COURSES.

101. PRINCIPLES OF PSYCHOLOGY. Designed for those who are preparing to teach, to become county agents or home demonstrators. The course deals with the processes of mental activity and growth and is prerequisite for psychology and educational psychology. Fall quarter. Three credits.
M. W. F. 11.00. *Professor Peterson.*

102. PSYCHOLOGY OF ADOLESCENCE. A course for those preparing to become high school teachers or directors of summer adolescents. Prerequisite, Education 101 or equivalent. Winter quarter. Three credits.
M. W. F. 11:00. *Professor Peterson.*

103. EDUCATIONAL PSYCHOLOGY. For prospective teachers and leaders of social and other activities. The principles studied in preceding courses are here applied to the processes of teaching and leadership. Prerequisite, Education 101 or its equivalent. Spring quarter. Three credits.
M. W. F. 11:00. *Professor Peterson.*

111. PRINCIPLES OF EDUCATION. A study of the educative process and of the means and aims of education and of their application in teaching and community leadership. Prerequisite, Education 101. Fall quarter. Three credits.
T. Th. S. 10:00. *Professor Peterson.*

112. RURAL EDUCATION. The principles of education applied to the high school teacher. Special attention will be given to Smith-Hughes teachers of Agriculture and Home Economics. Prerequisite, Education 101, 102, 103 and 111. Winter quarter. Three credits.
T. Th. S. 10:00. *Professor Peterson.*

113. RURAL EDUCATION. Designed to prepare county agents, home demonstrators and club leaders. This course will give special attention to Smith-Lever educational leadership. Open also to those preparing to teach in the practical studies in high school. Spring quarter. Three credits.
T. Th. S. 10:00. *Professor Peterson.*

120, 121. METHODS OF TEACHING HOME ECONOMICS. A course designed for teachers of home economics. Determination of objectives in home economics teaching. A study of the types of schools and courses; recent legislation; standards of accomplishment. General discussion of methods in teaching home economics. Fall and Winter quarters. Three credits each quarter.
T. Th. S. 8:00. *Assistant Professor Kewley.*

122. Apprentice Teaching in Home Economics. This course provides an opportunity for a first hand study of school plants, buildings, equipment, school procedure and good teaching. Supervised observation of all phases of home economics teaching in various schools of the State. Each apprentice teacher is required to teach a minimum of 30 successful lessons. Round table discussions and individual weekly conferences to parallel practice teaching. Prerequisite, Education 120, 121. Winter or Spring quarters. Five to ten credits.

Daily from 11:15 to 12:45. *Assistant Professor Kewley.*

124, 125, 126. Methods of Teaching Agriculture. For prospective Smith-Hughes and agricultural teachers. The home project and agricultural job analysis will be the basis of the course. Special topics considered are: The Smith-Hughes law and how it operates in Utah; selection and arrangement of subject matter; lesson planning; management of students in classroom, laboratory and field; visual and extension methods of teaching. Open to seniors. Fall, Winter and Spring quarters. Two credits each quarter.

T. Th. 1:00. *Assistant Professor Oberhansley.*

127. Apprentice Teaching in Agriculture. Opportunity will be provided for a limited number of men to do some personally directed teaching in Smith-Hughes work in the Logan High School. Fall, Winter and Spring quarters. Five to ten credits.

9:30 to 11:00 or 11:15 to 12:45.

Assistant Professor Oberhansley.

130. Smith-Hughes Summer Supervision. This course includes training in extension methods including demonstrations, keeping records and reports, outings, personal visits and general

supervision of a group of boys in summer projects. One to five credits.

Assistant Professor Oberhansley.

151. EDUCATIONAL ART FOR HIGH SCHOOLS. For those who want to teach art under the Smith-Hughes plan or in High School. The teaching of drawing, the crafts, costume design, interior decorations, commercial design, etc. Prerequisite, a knowledge of drawing and design. Fall quarter. Three credits.

T. Th. S. 10:00. *Professor Fletcher.*

161, 162, 163. SEMINAR IN EDUCATION. A study of special problems in the various phases of education. Individuals will choose or be assigned problems related to their work or prospective careers, which they will study thoroughly and report to the group or class. Another aspect of the work of the seminar will be the keeping abreast of the latest researches and review the best current literature in education. Open to seniors and graduates who have laid the necessary foundation in psychology and education. Fall, Winter and Spring quarters. One and one-half credits each quarter.

Hours to be arranged. *The Staff.*

For closely related courses see:
Bacteriology 14. (School Sanitation.)
Not given 1922-23. *Professor Greaves.*

Methods in Extension 201. (Methods of Extension Work.)
Professor Evans.

ENGLISH

Professor Pedersen*.
Professor Greever.
Professor Arnold.
Assistant Professor Kyle.
Assistant Professor Vickers.
Assistant Professor Dunn.
Mr. ....

VOCATIONAL COURSES.

b, c, d. Elementary English. Fundamentals of good writing, reading and speaking. Grammar, spelling, punctuation, composition applied to easy classics. Students may enter at any quarter. Fall, Winter and Spring quarters. Five credits each quarter.

Sec. 1, daily except Saturday 9:00.
Assistant Professor Vickers.
Sec. 2, daily except Thursday 10:00. Mr. ....

e, f, g. Oral and Written Composition. Letters and business forms. Novels, essays and plays will be read and discussed. Students may enter at any quarter. Fall, Winter and Spring quarters. Three credits each quarter.

Sec. 1, M. W. F. 8:00. *Assistant Professor Kyle.*
Sec. 2, T. Th. S. 9:00. *Assistant Professor Dunn.*

JUNIOR COLLEGE COURSES.

5. College Grammar. Course repeats. Three credits.
Sec. 1, Fall quarter, M. W. F. 8:00.

---

*On leave of absence.

Sec. 2, Winter quarter, T. Th. S. 8:00.

Sec. 3, Spring quarter, T. Th. S. 8:00.

Sections limited to thirty students.

Assistant Professor Vickers.

50, 51, 52. HISTORY OF ENGLISH LITERATURE. The literature of Great Britain from the Anglo Saxon period to the present day, with emphasis on the ages since Shakespeare. Fall, Winter and Spring quarters. Three credits each quarter.

Sec. 1, M. W. F. 8:00. *Assistant Professor Kyle.*

Sec. 2, M. W. F. 11:00. *Assistant Professor Vickers.*

10. FRESHMAN COMPOSITION.

Sec. 1, runs throughout the year. The first two quarters include considerable drill in the fundamentals of good writing and in rhetorical details. Business English will be emphasized during the last quarter. Three credits each quarter.

M. W. F. 9:00. *Mr.* ....

Sec. 2. Similar to Section 1. Runs through the Winter and Spring quarters only. Three credits each quarter.

T. Th. S. 8:00. *Mr.* ....

Sec. 3. Literary forms, descriptions, narration, stories. Fall Winter and Spring quarters. Two credits each quarter.

M. W. 10:00. *Mr.* ....

Sec. 4. Same as Section 3. Two credits each quarter.

T. S. 11:00. *Assistant Professor Vickers.*

Sec. 5. Exposition. Fall, Winter and Spring quarters. Two credits each quarter.

T. Th. 1:00. *Assistant Professor Kyle.*

Sec. 6. Exposition. Winter and Spring quarters. Three credits each quarter.
T. Th. S. 10:00. *Assistant Professor Kyle.*

82. American Literature. From colonial times to the present. Spring quarter. Three credits.
M. W. F. 8:00. *Professor Greever.*

SENIOR COLLEGE COURSES.

108, 109, 110. Advanced Writing. Course is based on current models as found in Cunliffe and Lomer's "Writing of To-day," which is used as a text. The training afforded should lead the student toward the magazine market. Prerequisite, English 10. Fall, Winter and Spring quarters. Two credits each quarter.
T. S. 11:00. *Professor Greever.*

115, 116, 117. The Essay. The English essay of the nineteenth century from Lamb to Stevenson. Recent English and American essays, by Arnold Bennett, H. G. Wells, G. K. Chesterton, Agnes Repplier and Samuel Crowthers. Fall, Winter and Spring quarters. Three credits each quarter.
T. Th. S. 9:00. *Assistant Professor Kyle.*

120, 121. Debating. Fall and Winter quarters. Two credits each quarter.
M. F. 8:00. *Professor Greever.*

125, 126, 127. Journalism. News collecting, study of country and city papers, preparation of agricultural feature stories for magazines and newspapers. Students of ability taking this course may sell much of their class work to the college department of information service, thus getting much training in publicity work and agricultural editorship. Fall, Winter and Spring quarters. Two credits each quarter.
T. Th. 1:00. *Professor Arnold.*

130, 131. The Bible as English Literature. This course will familiarize the student with the contents of the Bible. Some of the sub-topics are: History, prophecy, wisdom literature, poetry, the Bible as a whole. The emphasis is on reading, understanding and enjoying the great Book of Books. Open to students of the Junior College. Fall and Winter quarters. Three credits each quarter.
M. W. F. 10:00. *Assistant Professor Vickers.*

140, 141, 142. Shakespeare. Detailed study in class of six plays, Macbeth, Henry the Fourth, King Lear, Hamlet, Othello, Twelfth Night. Collateral reading: various other Shakesperean plays as well as a biography. Fall, Winter and Spring quarters. Three credits each quarter.
Professor Greever.

150, 151, 152. English Poets of the Nineteenth Century. Wordsworth, Coleridge, Scott, Bryon, Shelley, Keats and others will be considered in their relation to the Romantic Movement. Fall, Winter and Spring quarters. Three credits each quarter.
M. W. F. 9:00. *Assistant Professor Kyle.*

163, 164, 165. Modern Drama. Study of the drama from Ibsen to the present day. Representative plays from Great Britain, Spain, Scandinavia, Italy, France, Germany and America are included in the survey. Fall, Winter and Spring quarters. Three credits each quarter.
T. Th. S. 9:00. *Professor Greever.*

170. The Short Story. A study of the technic of the short story. Stories by de Maupassant, Poe, Hawthorne, Bret Harte, Kipling, O'Henry and others will be analyzed. Attention

will be given to the best short stories appearing in current magazines. Fall quarter. Three credits.
T. Th. S. 10:00. *Assistant Professor Kyle.*

For closely related courses see the following:
Philology *Professor Arnold.*

Marketing 131. (Writing of Advertisements.)
Professor Robinson.

Marketing 151. (Business Letters.)
Professor Robinson.

Marketing 152. (Direct Mail Advertising.)
Professor Robinson.

Marketing 153. (Business Reports.)
Professor Robinson.

Art 107. (Aesthetics.) *Professor Fletcher.*

ENTOMOLOGY

PROFESSOR HAWLEY.
ASSISTANT PROFESSOR PACK.

See Department of Zoology for related work.

VOCATIONAL COURSES.

a. ELEMENTARY APICULTURE. This course treats of the fundamentals of successful bee culture. Manipulation of colonies, the apiary, hives, transferring, feeding, extracting, diseases and improvement are given attention. Fall, Winter and Spring quarters. Four credits each quarter.
Hours to be arranged. *Mr.*..............................

b. Advanced Apiculture. The work of the preceding course is treated in a more advanced manner. The student is given practical training in the college apiary. Written reports and problems will be assigned to individual students. Prerequisite, course a. Fall, Winter and Spring quarters. Four credits each quarter.

Hours to be arranged. *Mr.*..............................

JUNIOR COLLEGE COURSES.

1. Agricultural Entomology. A brief study of injurious insects with special emphasis on the forms which occur in the intermountain region. Winter quarter. Three credits.

T. Th. S. 8:00. *Professor Hawley.*

2. Systematic Entomology. The structure of insects is studied in detail in order that the student will be able to use the tables employed in classification. Each student must colllect, mount and properly identify a representative collection of insects found in the vicinity of Logan. Fall, Winter and Spring quarters. Three credits each quarter.

Hours to be arranged. *Professor Hawley.*

3. General Entomology. A study of the structure, classification and life histories of insects. Special attention will be given to interesting instincts and habits. Methods of collecting, preserving and rearing will be briefly explained. Fall quarter. Four credits.

T. Th. S. 10:00; lab. W. 2:00 to 5:00.

Professor Hawley.

4. Economic Entomology. This course considers in detail the life histories and methods used for the control of insect pests. Special attention will be given to insecticides and methods of applying them. Prerequisite, Entomology 3. Winter quarter. Four credits.

T. Th. S. 10:00; lab. W. 2:00 to 5:00.

Professor Hawley.

5. Field Entomology. A study of insects in their natural habitats. Special attention will be paid to pests of fruit and truck crops in the vicinity of Logan. One class exercise and one field trip each week. Reports. Prerequisite, Entomology 1 or 3. Spring quarter. Two credits.

T. 10:00; lab. T. 2:00 to 5:00.

Professor Hawley and Assistant Professor Pack.

SENIOR COLLEGE COURSES.

114. Entomological Literature. Each student investigates and reports on the literature of some insect or insects within his state. Historical development of entomology, current entomological literature and bibliographies are considered. Prerequisite, Entomology 2 or 3. Fall, Winter or Spring quarter. Three credits.

Hours to be arranged. *Professor Hawley.*

115. Entomological Technic. Detailed studies of methods of collecting, preserving and rearing insects. A course in entomology involving the making of exhibit collections, the methods of breeding unknown forms, the principles of insect photography, etc. A course to fit students for specialized work in entomology. Prerequisite, Entomology 2 or 3.

Hours and credit to be arranged. *Professor Hawley.*

180. RESEARCH. Students may select or will be assigned certain problems dealing with different phases of entomology. The amount of credit will depend on the nature of the problems and the time spent. Thesis. Prerequisite, Entomology 2 or 3.

Hours and credit to be arranged.

Professor Hawley and Assistant Professor Pack.

FARM MECHANICS

ASSISTANT PROFESSOR A. H. POWELL.

Students taking Farm Mechanics may select work from the following courses: Automobile Work, Tractor Work, Machine Work, Forging, Woodwork, Leather Work, Rural Architecture.

JUNIOR COLLEGE COURSES.

11. Tillage, cultivating and harvesting machinery, pumping and water systems on the farm and general labor saving equipment. Fall quarter. Three credits.

Lec. T. Th. 8:00; lab. M. 2:00 to 5:00.

Assistant Professor Powell.

12, 13, 14. FARM MOTORS. (The design, operation, care and adjustments of the internal combustion engine; the general principles of construction; also minor repairs and adjustments of the automobile. Fall, Winter and Spring quarters. Five credits each quarter.

Lec. M. W. F. 8:00; lab. T. Th. 2:00 to 5:00.

Assistant Professor Powell.

15, 16. FARM REPAIR WORK. Elementary plumbing, rural home lighting plants and wiring, soldering, babbitting, common shop tools and equipment. Fall and Spring quarters. Five credits each quarter.

Lec. M. W. F. 9:00; lab. M. W. 2:00 to 5:00.

Assistant Professor Powell.

SENIOR COLLEGE COURSE.

107. FARM MACHINERY. A complete course in the care, repair and adjustments of the various types of farm machinery. Prerequisite, Farm Mechanics 11. Spring quarter. Five credits.

Lec. M. W. F. 11:00; lab. M. F. 2:00 to 5:00.

Assistant Professor Powell.

FOODS AND DIETETICS

PROFESSOR WHITACRE.
MISS WINNIFRED SMITH.

All students who elect Foods and Dietetics as their major are required to complete Foods 20 and 140. Students wishing to qualify as teachers of Foods and Dietetics must complete Education 120, 121 and 122.

VOCATIONAL COURSE.

a. FOOD FOR THE FAMILY. Nutritional, economic and sanitary influences affecting the choice of food; study of food to meet dietary needs of the normal family. Practice in food preparation. Lecture-laboratory combination of work. This course will begin in the Fall provided ten students register, otherwise it will begin with the Winter quarter. Three credits each quarter.

M. W. F. 9:00 to 12:00. *Miss Smith.*

JUNIOR COLLEGE COURSE.

20. Food Economics. General methods of food production d distribution. Study of principles underlying choice of food d practice in technic of preparation of human food. Prerequites, Chemistry 1, 2, and Physics 1, 2, 3; Prerequisites or parallel, hysiology 1, and Botany or Zoology 1, 2. Fall, Winter and pring quarters. Four credits each quarter.

Lec. T. Th. 1:00; lab. M. W. or T. Th. 2:00 to 5:00.

Professor Whitacre and Miss Smith.

SENIOR COLLEGE COURSES

103. Food Preservation. A study of the principles which nderlie food preservation and of the effect of the application of ese principles on food supply. Laboratory practice in preservaon methods suitable for home use. Prerequisites, Foods 20 or s equivalent and Bacteriology 1. Fall quarter. Three credits

Lec. S. 10:00; lab. T. Th. 10:00 to 1:00. *Miss Smith.*

105. Food Engineering. The economic, sanitary and esthetic principles involved in the purchase, preparation and erving of food. The essentials in planning of kitchen and ding room; the arrangement of furniture and equipment and the anagement of the work connected with home food problems as a actor in efficiency. Prerequisites, Art 1 and 2, Foods 20 or its quivalent. Advised prerequisites or parallels, Economics 1, 2, 3, extiles 20. Fall quarter. Three credits.

Lec. M. 8:00; lab. M. W. 2:00 to 5:00.

Professor Whitacre.

140. Dietetics. The principles of human nutrition. Hunan dietary needs; nutritive value of foods. Practice in con-

struction of dietaries to meet given needs. Prerequisites, Chemistry 21, 22 and 110, and Foods 20. Winter and Spring quarters. Five credits each quarter.

Lec. M. W. F. 8:00; lab. M. W. 2:00 to 5:00.

Professor Whitacre.

141. SPECIAL DIETS. Choice and preparation of food under conditions that present definite problems, as for infants and children, school lunches and the sick. Laboratory practice in preparation of foods suitable to demands in given instances. Collateral reading. Prerequisite, Foods 140. Fall quarter. Three credits.

Lec. W. F. 8:00; lab. F. 2:00 to 5:00.

Professor Whitacre.

GRADUATE COURSE.

210, 211, 212. SPECIAL PROBLEMS. Seminar. Project to be planned with instructor and carried out under her supervision. Prerequisite, Foods 140. Fall, Winter and Spring quarters. Time and credit to be arranged with instructor in charge.

Professor Whitacre.

GEOLOGY

PROFESSOR WILLIAM PETERSON.
MR. CARDER.

VOCATIONAL COURSE.

a. PHYSIOGRAPHY. Special emphasis on the intermountain region. Given if ten or more students apply. Winter quarter. Three credits.

M. W. F. 8:00. *Mr. Carder.*

SENIOR COLLEGE COURSES.

102, 103, 104. General Geology. Dynamic, structional and historical geology. The changes the earth's surface is now undergoing and the forces which produce them as a means of interpreting the past. Laboratory study of the common rocks and rock-forming minerals, with special stress on the soil product resulting from rock disintegration. A careful study of the geological development of the North American continent. Field trips with written reports. Students taking Geology 102, 103, 104, should also take Philology 1. Prerequisites, Chemistry 1 and Zoology 3. Fall, Winter and Spring quarters. Three credits each quarter.

T. Th. S. 9:00. *Professor Peterson.*

105, 106. General Geology. The same course material will be presented in Geology 105, 106, as in Geology 102, 103, 104, but it will be given in two quarters, five days a week, instead of in three quarters, three days a week. This course will be given if ten or more students apply for it. Winter and Spring quarters. Five credits each quarter.

Daily, except Th. 10:00. *Mr. Carder.*

107, 108, 109. Economic Geology. The first part of the course will deal with the non-metals with special emphasis on mineral fertilizers. the second part, with metals, their origin and economic uses. Any quarter may be taken without the others. Prerequisite, Geology 102, 103, 104 or 105, 106. Fall, Winter and Spring quarters. Three credits each quarter.

M. W. F. 9:00. *Mr. Carder.*

110. Mineralogy. Individual laboratory work in chrystalography, blow pipe analysis and determinative mineralogy. Prerequisites, Chemistry 1, 2. One recitation and two laboratory periods. Students may start any time. Credit in proportion to work done. Given if ten or more students apply. *Mr. Carder.*

111. GEOLOGY OF GROUND WATER. A study of structure to determine the cause of springs, artesian wells, etc. Structural characteristics that will yield water, either through tunneling or boring. Prerequisites, Geology 102, 103, 104 or 105, 106, and Physics 1, 2, 3. Spring quarter. Five credits.

Daily, except Th. 11:00. *Professor Peterson.*

112. ADVANCED PHYSIOGRAPHY. For students who wish a more complete knowledge of physiographic features and processes than can be given in Geology "a". Prerequisites, Geology 102, 103, 104 or 105, 106. Fall quarter. Three credits.

T. Th. S. 10:00. *Mr. Carder.*

113. PETROLOGY. The origin and formation of the different kinds of igneous rocks and methods for the determination of the minerals which compose them. Prerequisites, Geology 102, 103, 104 or 105, 106; Geology 110 and Chemistry 1. Lectures, reading and laboratory work. Any quarter. Credit to be arranged.

Mr. Carder.

114. Field methods necessary in mapping the detailed geology of an assigned area.

Time and credit to be arranged.

Professor Peterson.

115. LOCAL GEOLOGY. The relief of Utah and bordering states. Relation of the country rock and physical features to productive land areas. One piece of relief modeling may be required from each student. Prerequisite, Geology 102, 103, 104 or 105, 106. Fall quarter. Three hours. Two or three credits. Laboratory to be arranged.

Professor Peterson and Mr. Carder.

116. GEOLOGY. Relief modeling, methods by which any topographic map may be converted into a true relief model including

ither the geology or detailed geography as the student may se- ect. Either Fall or Winter quarter. Two or three credits.
Hours to be arranged. *Professor Peterson.*

117. Agricultural Geology. Local geology in the valleys f Utah. A detailed study will be made of the rock formations urrounding each valley and the character of soils from the dis- ntegration of these rocks. The course will be prefaced by a tudy of structural and relief features of Utah as well as a general urvey of the drainage systems as they have influenced the dis- osition of disintegrated rock in the forming of soil. Fall quar- er. Three credits.
T. Th. S. 11:00. *Professor Peterson.*

118. Engineering Geology. Dynamical and structural geology as it applies to construction work. Special attention is given to materials affecting road construction, dams and excavations. Winter quarter. Five credits.
Daily, except Th. 11:00. *Professor Peterson.*

HISTORY

Professor Ricks.
Professor Robinson.

JUNIOR COLLEGE COURSES.

1. World History. From the Fall of Rome to the Hundred Years War. Fall quarter. Three credits.
T. Th. S. 9:00. *Professor Ricks.*

2. World History. From the Hundred Years War to Louis XIV. Winter quarter. Three credits.
T. Th. S. 9:00. *Professor Ricks.*

3. World History. From Louis XIV to 1920. Spring quarter. Three credits.
T. Th. S. 9:00. *Professor Ricks*

15. Western United States History. The Rocky Mountain and Pacific Coast History since the Spanish period. Specia attention is given to Utah history. Three credits.
Not given in 1922-23.

30. English History. Political and Social history of England to 1485. Fall quarter. Three credits.
M. W. F. 9:00. *Professor Robinson.*

31. English History. Political and Social History of England, 1485-1815. Winter quarter. Three credits.
M. W. F. 9:00. *Professor Robinson.*

32. English History. Political and Social history of England, 1815 to the present. Particular attention will be paid to Anglo-American relations and to England's part in the War of 1914. Spring quarter. Three credits.
M. W. F. 9:00. *Professor Robinson.*

40. Modern European History. Political and social history of modern Europe to 1815. Fall quarter. Three credits.
Not given in 1922-23.

41. Modern European History. Political and social history of Europe, 1815 to the signing of the Peace of Versailles, with special treatment of the forces that produced the World War. Winter quarter. Three credits.
Not given in 1922-23.

42. Current World History. A study of the current vents of international significance and their origins in the immeiate past. Spring quarter. Three credits.

Not given in 1922-23.

SENIOR COLLEGE COURSES.

113. United States History. Political, social and economic history of America to the American Revolution. Fall quarter. Three credits.

M. W. F. 8:00. *Professor Ricks.*

114. United States History. Political, social and economic history of America, from the American Revolution to the Civil War. Winter quarter. Three credits.

M. W. F. 8:00. *Professor Ricks.*

115. United States History. Political, social and economic history of America from the Civil War to the present. Spring quarter. Three credits.

M. W. F. 8:00. *Professor Ricks.*

121. The Expansion of Europe. Fall quarter. Three credits.

Hours to be arranged. *Professor Ricks.*

122. Recent European History. From the Franco-Prussian War to 1922. Winter quarter. Three credits.

Hours to be arranged. *Professor Ricks.*

123. Problems in Recent United States History. From the Spanish-American War to 1922. Spring quarter. Three credits.

Hours to be arranged. *Professor Ricks.*

HORTICULTURE

Assistant Professor Abell
Mr. Emil Hansen.
Mr. Frank N. Harmon.

The following courses are required of all students majoring in Horticulture: 4, 5, 6, 8, 9, 102, 105, 107, 108.

Courses 1, 2 and 3, treat of the general principles of horticulture and are given without the usual accompanying laboratory work. They are designed especially for agricultural or other students not specializing in horticulture, but who desire to become acquainted with the general feld of horticultural information and practice without going into the details of technical laboratory study. It is desirable that Botany 21, 22, 23, precede or accompany these three courses

VOCATIONAL COURSES

a. Fruit Growing in the West. A study of the principles and practices governing fruit production in arid regions. Fall quarter. Three credits.

Lec. W. F. 8:00; lab. M. 2:00 to 5:00.

Assistant Professor Abell and Mr. Harmon.

b. Practical Horticulture. Horticultural operations. Budding, grafting, pruning, spraying, plant propagation, greenhouse and nursery practice. Winter quarter. Three credits.

Lec. W. F. 8:00; lab. M. 2:00 to 5:00.

Assistant Professor Abell and Mr. Harmon.

c. The Principles of Gardening. Planning, planting and are of gardens. Study of varieties and garden operations. Prouction emphasized. Spring quarter. Three credits.

Lec. W. F. 8:00; lab. M. 2:00 to 5:00.

Assistant Professor Abell and Mr. Harmon.

d. Floriculture. Practical greenhouse work. Hours and redit to be arranged. *Mr. Hansen.*

JUNIOR COLLEGE COURSES.

1. Orchard and Small Fruits. Fall quarter. Three redits.

M. W. F. 9:00. (Given in 1922-23. Alternates with Hortiulture 4.) *Assistant Professor Abell.*

2. Principles of Plant Propagation. Winter quarter. Three credits.

M. W. F. 9:00. (Given in 1922-23. Alternates with Hortiulture 5.) *Assistant Professor Abell.*

3. Vegetable and Landscape Gardening. This course is also planned to meet the needs of Home Economics students. Spring quarter. Three credits.

M. W. F. 9:00. (Given in 1922-23. Alternates with Horticulture 6.) *Assistant Professor Abell.*

4. Pomology. Principles and practices underlying home and commercial fruit growing. Fall quarter. Three credits.

Lec. T. Th. 9:00; lab. W. 2:00 to 5:00. (Alternates with Horticulture 1.)

Not given in 1922-23.

5. Horticultural Technic and Plant Propagatio Principles and methods in horticultural technic. Studies in bu ding, grafting, reproduction by seeds and vegetative parts, nu sery practice, spraying apparatus and materials. Winter quarte Three credits.

Lec. T. Th. 9:00; lab. W. 2:00 to 5:00. (Alternates wit Horticulture 2.)

Not given in 1922-23.

6. Olericulture. Principles and practices underlying pr duction of vegetable crops and methods of handling for home an commercial purposes. Study of varieties and their adaptation Fall quarter. Three credits.

Lec. T. Th. 9:00; lab. W. 2:00 to 5:00. (Alternates wit Horticulture 3.)

Not given in 1922-23.

7. Practical Pomology. Practical problems pertaining t orchard practice, pruning, frost injury and prevention, plantin spraying, thinning, fertilizing and growth of cover crops. Prere quisite, Horticulture 1 or 4. Spring quarter. Three credits.

Lec. W. 11:00; lab. T. Th. 2:00 to 5:00. (Alternates wit Horticulture 8.) *Assistant Professor Abel*

8. Small Fruits. Propagating, cultivating, pruning, ha vesting and marketing of berries, currants and grapes. Histor and characteristics of varieties. Spring quarter. Three credits.

Lec. T. Th. 8:00; lab. W. 2:00 to 5:00. (Alternates wit Horticulture 7.)

Not given in 1922-23.

9. Landscape Gardening. Principles underlying hom and city beautification. Preparation of ground, selection an

rouping of ornamental plants, care of lawns, designing of plans. otany 21, 22, 23, should precede or accompany this course. Fall arter. Three credits.

Lec. M. W. 11:00; lab. T. 2:00 to 5:00. (Alternates with orticulture 102.) *Assistant Professor Abell.*

10. Home Floriculture. Propagation and care of plants seful for home decoration. Exterior plantings, flower beds and orders. Designed for students in Home Economics as well as or horticultural students. Spring quarter. Three credits.

Lec. T. Th. 11:00; lab. F. 2:00 to 5:00. (Alternates with orticulture 105.)

Assistant Professor Abell and Mr. Hansen.

SENIOR COLLEGE COURSES.

101. General Horticulture. Study of the various phases f horticulture from the viewpoint of correlation with general nd specialized farming. Intended primarily for Senior College gricultural students not specializing in horticulture. Spring uarter. Five credits.

Lec. M. W. F. 10:00; lab. T. Th. 2:00 to 5:00.

Assistant Professor Abell.

102. Systematic Pomology. History and characteristics of fruit species and origin of varieties. Variety characteristics and adaptations. Fruit scoring and preparation for judging fruit exhibits. Prerequisite, Horticulture 1 or 4. Fall quarter. Three credits.

Lec. M. W. 11:00; lab. T. 2:00 to 5:00. (Alternates with Horticulture 9.)

Not given in 1922-23.

103. FUNDAMENTALS OF PLANT PROPAGATION. A technical study of the underlying principles of heredity and propagation from the standpoint of sexual and asexual reproduction. Winter quarter. Two credits.

W. F. 10:00. (Alternates with Horticulture 107.)

Not given in 1922-23.

104. LANDSCAPE DESIGN. Advanced practice in landscape art. Prerequisite, Horticulture 9. Winter quarter. Three credits.

Lec. W. 11:00; lab. T. Th. 2:00 to 5:00. (Alternates with Horticulture 106.

Assistant Professor Abell.

105. BREEDING OF HORTICULTURAL PLANTS. Fundamentals of Mendelism, genetics and biometry. Study of hereditary characters, environmental variations and practical plant breeding of horticultural plants. Prerequisites, Horticulture 2 or 5, and Botany 21, 22, 23. Spring quarter. Three credits.

Lec. T. Th. 11:00; lab. F. 2:00 to 5:00. (Alternates with Horticulture 10.)

Not given in 1922-23.

106. HORTICULTURAL BY-PRODUCTS. Utilization of waste materials. Bio-chemistry of processes in plant products. Ripening, storage, decay, fermentation, canning operations. Prerequisites, Horticulture 4, 6, 8, Botany 120, Chemistry 21, 22, and Bacteriology 1, 2. Fall quarter. Three credits.

Lec. M. W. 11:00; lab. T. 2:00 to 5:00. (Alternates with Horticulture 104.)

Not given in 1922-23.

107. History of Cultivated Plants. Historical consideration of wild plants in nature from earliest times and their gradual adaptation to the uses of man. Winter quarter. Two credits.
W. F. 10:00. (Alternates with Horticulture 103.)
Assistant Professor Abell.

108. Seminar. Review of current literature. For advanced students. One hour a week. One credit each quarter.
Time to be arranged. *Assistant Professor Abell.*

109. Research. For students with adequate preparation. Time and credit to be arranged.
Assistant Professor Abell.

HOUSEHOLD ADMINISTRATION

Assistant Professor Kewley.
Professor Fletcher.
Professor Whitacre.
Professor Moen.
Assistant Professor Dancy.

Students who elect Household Administration as their major are required to complete the following courses: Household Administration 25, 122, 123, 125, 130, 150. Students wishing to qualify as teachers of Household Administration must complete Education 120 and 122.

JUNIOR COLLEGE COURSES.

10. Personal Accounts. Keeping accurate records of each student's expenditures during college life; a critical and

comparative study of students' spending habits as shown by the actual accounts kept; consideration of the principles underlying wise buying. Open to all college women. Fall, Winter and Spring quarters. One credit each quarter.

Friday 12:00. *Professors Whitacre and Moen.*

(Any college student who has received 3 hours credit for the above course may earn 1 hour of credit by keeping records of one year's expenditures during college life, using for the record the form employed for class use and doing the work under supervision of the instructor in charge of Household Administration 10.)

20. HISTORY OF DOMESTIC ARCHITECTURE. History of the house from primitive times to the present. Spring quarter. Three credits.

M. W. F. 10:00. *Professor Fletcher.*

21. HISTORY OF FURNITURE. History of interior decoration and furniture styles. Spring quarter. Three credits.

Not given 1922-23. *Professor Fletcher.*

25 HOME HEALTH AND NURSING. Special emphasis on the prevention of disease and on the building up of the highest degree of health as one of the principal functions of the home keeper. The treatment of functional disturbances, injuries, wounds, etc., receive due attention. Lectures, discussions and laboratory demonstrations. The reading of reference works and writing of special reports are required. Winter and Spring quarters. Three credits each quarter.

Lec. T. Th. 8:00; lab. M. or Th. 2:00 to 5:00.

Assistant Professor Dancy.

SENIOR COLLEGE COURSES.

MOTHERCRAFT, CHILD WELFARE. Vital questions of the adolescent period. Correct and incorrect impressions concerning the prenatal influence, physiological changes during pregnancy. Care of the expectant mother, care of the infant and causes and prevention of infant mortality will be considered. Prerequisite, Household Administration 25. Fall quarter. Three credits.

Lec. M. W. F. 9:00. *Assistant Professor Dancy.*

130. LITERATURE FOR CHILDREN. Study of the child and institutional factors affecting him; the child and the book; the adolescent and the book; types of literature for children; contributions to children's literature of Greece, Rome and other countries. Spring quarter. Three credits.

Not given in 1922-23.

150. HOUSEHOLD MANAGEMENT. A study of the organization and management of the household and of the ideals fundamental to wholesome family life. Laboratory projects will consist of the application of the underlying principles of household management during the 6 to 12 weeks residence in the Home Economics Cottage. A fee of $6.00 per week will be charged each student while in residence. Open to seniors only. Prerequisites, Accounting 107; Foods 105; Textiles 20. Two lectures each week in addition to the laboratory projects in the cottage. Fall quarter. Five credits.

Lec. T. Th. 12:00. *Assistant Professor Kewley*

For closely related courses see the following:

Art 122 (Home Furnishing). *Professor Fletcher*

Art 123 (Home Furnishing). *Professor Fletcher*

Accounting 107 (Household Accounts).

Professor P. E. Peterson.

IRRIGATION AND DRAINAGE

PROFESSOR ISRAELSEN.
PROFESSOR RAY B. WEST.
ASSOCIATE PROFESSOR WINSOR.
JUDGE BULLEN.
MR. FIFE.

Students who major in Irrigation and Drainage will be required to complete Irrigation and Drainage 1, 2, 3, 104, 105 and 107, 108, or their equivalents and to present a thesis concerning some special problem to be assigned by the Department, as announced in courses 110, 111. They will be required also to spend at least one summer of 12 weeks in doing some kind of practical work in irrigation or drainage, for which they may receive remuneration; such work to be approved by the head of the Department.

VOCATIONAL COURSES.

a. FARMERS' COURSE IN IRRIGATION AND DRAINAGE. Practical information on measurement of irrigation water, construction of small headgates and ditches, methods of handling irrigation water on different types of soil and common problems in farm drainage. Winter quarter. Three credits.

M. W. F. 8:00. *Associate Professor Winsor.*

b. WATER MASTERS' SHORT COURSE. Practical information concerning water measurement, capacities of soils, water requirements of crops, preparation of land for irrigation, boring wells, installation of pumps for irrigation purposes, water rights doctrines and other equally important irrigation problems. One week, beginning January 16, 1923.

Professor Israelsen.
Associate Professor Winsor
Mr. Fife and Others.

JUNIOR COLLEGE COURSES.

1. Irrigation and Drainage Practice. Water measurement, effect of soil and plant on time and frequency of irrigation, duty of water, design of farm ditches and preparation of land for irrigation, pumping for irrigation and methods of farm drainage. This course may be used in satisfying the major or minor requirements in the department of Agronomy. Fall quarter for students in Agricultural Engineering. Spring quarter for students in Agriculture. Five credits.

Sec. 1, Fall quarter. Lec. M. W. F. 11:00; lab. M. W. or W. F. 2:00 to 5:00.

Sec. 2, Spring quarter. Lec. M. W. F. 11:00; lab. M. W. or W. F. 2:00 to 5:00. *Professor Israelsen and Mr. Fife.*

2, 3. Hydraulics. Laws of liquids in motion and at rest, flow in natural and artificial channels and elementary principles of water power development. Prerequisite, Mathematics 22 or its equivalent. Fall and Winter quarters. Three credits each quarter.

Lec. T. Th. 9:00; lab. M. 2:00 to 5:00. *Mr. Fife.*

SENIOR COLLEGE COURSES.

103. Design of Drainage Systems. Preliminary survey, location of drains, flow in drains and in open channels and con-

struction of drainage systems with special reference to the drainage of irrigated lands. Prerequisites, Irrigation and Drainage 2, 3. Spring quarter. Five credits.

Lec. T. Th. S. 9:00; lab. F. 12:00 to 5:00.

Professor Israelsen.

104, 105. DESIGN OF IRRIGATION SYSTEMS. Sources of water supply, diversion works, canal alignment and cross section, flumes, drops and spillways. Prerequisites, Irrigation and Drainage 2, 3. Fall and Spring quarters. Five credits each quarter.

Lec. M. W. F. 10:00; lab. T. Th. 2:00 to 5:00.

Professor Israelsen.

106. MANAGEMENT AND OPERATION OF IRRIGATION SYSTEMS. Delivery of water to irrigators, annual water charges operation costs. Prerequisite, design of irrigation systems. Winter quarter. Three credits.

W. M. F. 11:00. *Associate Professor Winsor.*

107, 108. IRRIGATION INSTITUTIONS. (Given by the Departments of Irrigation and Drainage and Political Science, jointly.) Water right doctrines, laws governing the adjudication and acquirement of water rights and the distribution of water; organization of irrigation enterprises. Prerequisite or parallel, a general course in Economics or Sociology. Winter and Spring quarters. Three credits each quarter.

T. Th. S. 8:00. *Winter quarter, Professor Israelsen*

Spring quarter, Judge Bullen.

110, 111. UNDERGRADUATE—THESIS AND SEMINAR. Papers and discussion upon problems concerning irrigation or drainage. Required of students who major in Irrigation and Drainage. Fall and Winter quarters. One credit each quarter.

F. 12:00.

Professor Israelsen, Professor West, Associate Professor Winsor and Mr. Fife.

GRADUATE COURSES.

As a condition for enrollment in a graduate course, the student must submit satisfactory evidence of his qualifications for the work proposed to the instructor in charge of the course.

230. Hydrology and Advanced Irrigation Design. The occurrence, utilization and control of water, rainfall, stream flow, and runoff, measurements and records, reservoirs, and pumping for irrigation. Open to specially prepared seniors. Winter quarter. Three credits.
M. W. F. 9:00. *Professor Israelsen.*

298. Research in Irrigation and Drainage. Specially prepared undergraduate or graduate students may elect a problem in irrigation for investigation, subject to the approval of the professor in charge. Such investigations may be conducted at the College or elsewhere. The studies may be used as a basis for a thesis to meet in part the requirements for an advanced degree. Any quarter.
Credits and hours to be arranged.
Professor Israelsen, Professor West, or Associate Professor Winsor.

LIBRARY ECONOMY

Miss Hattie Smith.

1. General Reference. Classification and arrangement of books, the card catalog, reference books. Text: "List of Reference Books in the Utah Agricultural Library." Winter and Spring quarters. One credit each quarter.
T. 1:00. *Miss Smith.*

MARKETING

Professor Robinson.
Professor Wanlass.
Professor P. E. Peterson.
Professor Harris.
Assistant Professor Thain.

VOCATIONAL COURSE.

a. Marketing of Farm Products. An elementary course dealing with the methods and organization used in the marketing of farm crops. Winter quarter. Three credits.
M. W. F. 9:00. *Assistant Professor Thain.*

SENIOR COLLEGE COURSES.

101. Psychology of Advertising and Selling. A study of the chief human instincts, needs and emotions. How the laws of psychology may be applied to business. Prerequisites or parallel, Economics 1, 2, 3 or 120, 121. Fall quarter. Three credits.
M. W. F. 11:00. *Professor Robinson.*

102. Advertising. A first course, designed to meet the needs of all students in business who want a general knowledge of advertising. The literature of advertising; the makeup of advertisements for newspapers and magazines; some experience in the writing of advertisements. Prerequisites or parallel, Economics 1, 2, 3, or 120, 121. Winter quarter. Three credits.
M. W. F. 11:00. *Professor Robinson.*

103. Salesmanship. A first course, designed to meet the need of students who want a general knowledge of the principles underlying selling. Demonstration sales. Prerequisites or parallel, Economics 1, 2, 3, or 120, 121. Three credits.
M. W. F. 11::00. *Professor Robinson*

111. Agricultural Commerce. This course will cover the basic facts necessary to a clear understanding of the problems in marketing. Supply and demand of farm products, prices and production, the economic relations of the farmer, the middleman and the consumer receive special consideration. Prerequisites, Economics 1, 2, 3, or 120, 121. Fall quarter.

M. W. F. 9:00. *Professor Wanlass.*

112. Marketing of Farm Products. Problems of marketing specific farm products, such as livestock, grains, potatoes, hay, dairy products, etc., will be studied from the standpoint of the economic forces which give rise to such problems. Possibilities of improvement of the present system will be considered. Prerequisites, Economics 1, 2, 3, or 120, 121. Winter quarter. Three credits.

M. W. F. 9:00. *Professor Wanlass.*

113. Co-operation in Agriculture. Growth of the co-operative movements with the viewpoint of showing their strength and weakness; co-operative principles and the practicability of their application will receive first consideration. Prerequisites, Economics 1, 2, 3, or 120, 121. Spring quarter. Three credits.

M. W. F. 9:00. *Professor Wanlass.*

121. Geography of Commerce. This course will deal with geography as related to commerce. The environmental factors, natural resources, climate, population, etc., will be studied from the commercial viewpoint. An analysis of their resources and industries and their geographical distribution will be made. Typical industries will be followed from the production of their raw materials to the marketing of their finished products. Fall quarter. Three credits.

T. Th. S. 8:00. *Professor Harris*

131, 132. Retail Store Problems. The aim of this course is to present, by means of carefully collected and co-ordinated cases, the management problems of a retail store which arise in shaping its merchandising policies. The problems studied include accounting, statistics, organization, merchandise, selling, stock, buying, personnel, finance, price policies, and general administrative policy. Winter and Spring quarters. Three credits each quarter.

M. W. F. 2:00. *Professor E. P. Peterson.*

141. Writing Advertisements. An advanced course covering the preparation of advertising copy, the layout of advertisements, typography, media, rates, etc. Prerequisites, Marketing 101 and 102, English 10 (Business English). Fall quarter. Three credits.

M. W. F. 10:00. *Professor Robinson.*

142. Advertising Campaigns. An advanced course covering the planning and execution of advertising campaigns, the duties of the advertising manager and the functions of the advertising agency. Prerequisite, Marketing 102. Winter quarter. Three credits.

M. W. F. 10:00. *Professor Robinson.*

151. Sales Management. An advanced course covering the duties of the sales manager, sales policies, routing salesman. The case system will be used. Prerequisite, Marketing 103. Spring quarter. Three credits.

M. W. F. 10:00. *Professor Robinson.*

161. Business Letters. An advanced course covering a study of the business letter, including sales, credit, collection and complaint letters and letters of application. Prerequisite, English 10 (Business English). Fall quarter. Two credits.

T. Th. 9:00. *Professor Robinson.*

162. DIRECT MAIL ADVERTISING. An advanced course covering the preparation of direct mail advertising material, including booklets, inclosures, house organs, etc., but excluding sales letters, which are covered in Marketing 161. Prerequisite, English 10 (Business English). Winter quarter. Two credits.
T. Th. 9:00. *Professor Robinson.*

163. BUSINESS REPORTS. How to organize and write business reports. Prerequisite, English 10 (Business English). Spring quarter. Two credits.
T. Th. 9:00. *Professor Robinson.*

171. ADVERTISING AND SALES PROBLEMS. A course in special advertising and sales problems. The student may take up any phase of the subject for which he is adequately prepared. No student may register for this course without first securing the permission of the instructor in charge. Any quarter. Credit will be allowed in proportion to the amount of work completed.
Hours to be arranged. *Professor Robinson.*

GRADUATE COURSES.

Never before in the history of the United States has there been such widespread and intense interest in the subject of marketing. This is particularly true with reference to the marketing of farm products and livestock. The recently established Bureau of Markets is now the largest subdivision of the Federal Department of Agriculture. Most of the States have established marketing agencies of various kinds. If these governmental agencies are to function properly and if a better marketing system is to be evolved, there will be an ever increasing need for men and women who are thoroughly trained in the economics of marketing. It is with the hope that assistance might be given in providing facilities for this kind of training that the following graduate courses are offered.

201. ECONOMICS OF MARKETING. In this course the fundamental principles underlying the present distributive system will be carefully studied. The case method will be used. Fall quarter. Three credits.

T. 2:00 to 4:00. *Professor Wanlass.*

202. MARKETING PROBLEMS. This course will be a continuation of course 201, except that special attention will be given to specific marketing problems, particularly those of the inter-mountain section. Winter quarter. Three credits.

T. 2:00 to 4:00. *Professor Wanlass.*

203. SEMINAR IN MARKETING. Early in the year each student will be assigned a definite problem or field for special study. During the spring quarter reports on these special assignments will be made and criticised. This work may be used to satisfy the thesis requirement for the master's degree. Spring quarter. Three credits.

T. 2:00 to 4:00. *Professor Wanlass.*

MATHEMATICS

PROFESSOR SAXER.
MR. MCDONALD.
MR. CARDER.

VOCATIONAL COURSES.

a. VOCATIONAL ALGEBRA. A brief course in elementary algebra. Daily for twelve weeks during the Summer quarter.

b, c, d. PLANE GEOMETRY. Fall, Winter and Spring quarters. Three credits each quarter.

M. W. F. 9:00. *Mr. McDonald.*

JUNIOR COLLEGE COURSES.

20. ELEMENTARY ANALYSIS. Elementary graphical methods for presenting facts. Relation of the graph to algebra, arithmetic and geometry. Review of elementary algebra. Prerequisites, one year high school algebra and geometry. Fall quarter. Three credits.

Sec. 1, M. W. F. 8:00.
Sec. 2, M. W. F. 11:00. *Professor Saxer.*

21. ELEMENTARY ANALYSIS. A continuation of Mathematics 20. Graphical and algebraical solution of triangles. Trigonometry and the use of trigonometric tables. Use of logarithms, slide rule, etc. Prerequisite, Mathematics 20. Winter quarter. Three credits.

Sec. 1, M. W. F. 8:00.
Sec. 2, M. W. F. 11:00. *Professor Saxer.*

22. ELEMENTARY ANALYSIS. A continuation of mathematics 21. Freshman algebra with applied problems from the various departments of the college. Prerequisite, Mathematics 21. Spring quarter. Three credits.

Sec. 1, M. W. F. 8:00.
Sec. 2, M. W. F. 11:00. *Professor Saxer.*

30. SOLID GEOMETRY. Spring quarter. Five credits. Daily except Thursday. 10:00.

Not given 1922-23. *Mr. McDonald.*

45. COLLEGE ALGEBRA. Prerequisite, one and one-half years of high school algebra. Five credits.

Sec. 1, Fall quarter. Daily, except Thursday, 10:00.
Sec. 2, Spring quarter. Daily, except Thursday, 10:00.
Mr. McDonald.

46. TRIGONOMETRY. Prerequisite, Mathematics 45. Winter quarter. Five credits.
Daily, except Thursday, 10:00. *Mr. McDonald.*

50. GENERAL ASTRONOMY. Prerequisites, General Physics, and Mathematics 22 or 46. Spring quarter. Five credits.
Daily except Saturday, 8:00. *Mr. Carder.*

60. MATHEMATICAL THEORY OF INVESTMENT. Prerequisite, Mathematics 22 or 45. Fall quarter. Three credits.
T. Th. S. 8:00. *Professor Saxer.*

61. PROBABILITY AND LIFE INSURANCE. A continuation of Mathematics 60. Prerequisite, Mathematics 60. Winter quarter. Three credits.
T. Th. S. 8:00. *Professor Saxer.*

SENIOR COLLEGE COURSES.

107. ANALYTICAL GEOMETRY. Prerequisite, Mathematics 22 or 46. Fall quarter. Three credits.
M. W. F. 9:00. *Professor Saxer.*

108. DIFFERENTIAL CALCULUS. Prerequisite, Mathematics 107. Winter quarter. Three credits.
M. W. F. 9:00. *Professor Saxer.*

109. INTEGRAL CALCULUS. Prerequisite, Mathematics 108. Spring quarter. Three credits.
M. W. F. 9:00. *Professor Saxer.*

120. ADVANCED ANALYTICAL GEOMETRY. With applications. Prerequisite, Mathematics 109. Fall quarter. Three credits.
T. Th. S. 9:00. *Professor Saxer.*

121. Advanced Calculus. Together with applications to engineering and the sciences. Prerequisite, Mathematics 120. Winter quarter. Three credits.
T. Th. S. 9:00. *Professor Saxer.*

122. Differential Equations and their applications. Prerequisite, Mathematics 121. Spring quarter. Three credits.
T. Th. S. 9:00. *Professor Saxer.*

MECHANIC ARTS

FORGING AND GENERAL BLACKSMITHING

Assistant Professor Egbert.

An average of one-third of the time in all courses in forging is spent demonstrating and lecturing.

VOCATIONAL COURSES.

a, b, c. Forge Practice. Forging, welding, tempering, tool making and other operations essential to forge shop work. Fall, Winter and Spring quarters.

Sec. 1 and 2, daily 8:00 to 11:00. Seven credits each quarter.

Sec. 3 and 4, daily except Saturday 2:00 to 5:00. Six credits each quarter. *Assistant Professor Egbert.*

d, e, f. Shop Course. Select work from Forge Practice a, for agricultural, automobile and tractor students who can not spend each day in the shops. Fall, Winter and Spring quarters. Sections 1, 2 and 3, four credits each quarter. Section 4,, three credits each quarter.

Sec. 1, M. W. F. 8:00 to 11:00.

Sec. 2, T. Th. S. 8:00 to 11:00.
Sec. 3, M. W. F. 2:00 to 5:00.
Sec. 4, T. Th. 2:00 to 5:00.

Sections 1 and 3 reserved for course d, men in Fall and Spring quarters. Beginners taken in for all four sections, Winter quarter. *Assistant Professor Egbert.*

g. Advanced Short Course. For students who have had some work, but cannot fit the regular schedule. Work selected from regular courses. Time and credit to be arranged with the instructor. *Assistant Professor Egbert.*

JUNIOR COLLEGE COURSES.

1, 2, 3. Forge Shop Operations Advanced forging and general repair work, including plow work, spring work, axle and tire setting and horseshoeing. Prerequisites, Forge Practice a, b, c. Fall, Winter and Spring quarters. Five credits each quarter.

Sec. 1, daily except Saturday, 8:00 to 11:00.
Sec. 2, daily except Saturday, 2:00 to 5:00.

Assistant Professor Egbert.

7, 8, 9. Automobile Repairs. Repairing and building bodies, wheels and springs. Prerequisites, Forge Shop Operations 1, 2, 3. Fall, Winter and Spring quarters. Five credits each quarter.

Sec. 1, daily except Saturday, 8:00 to 11:00.
Sec. 2, daily except Saturday, 2:00 to 5:00.

Assistant Professor Egbert.

SENIOR COLLEGE COURSES.

104, 105, 106. Advanced Shop Practice. The student may emphasize any line of blacksmith work that suits his particular needs. Prerequisite, Forge Shop Operations. Fall, Winter and Spring quarters. Five credits each quarter.

Sec. 1, daily except Saturday, 8:00 to 11:00.
Sec. 2, daily except Saturday, 2:00 to 5:00.

Assistant Professor Egbert.

FOUNDRY. Operated for demonstration and the making of castings. If a sufficient number of students apply, the foundry will be run for instructional purposes also. Credit will be given for unfinished courses according to work done. Not less than two credits will be given.

MACHINE WORK

ASSOCIATE PROFESSOR NEWEY.
MR. STEVENS.

JUNIOR COLLEGE COURSES.

1, 2, 3. MACHINE SHOP PRACTICE. Lathe, planer, shaper, drill-press operation, the use of hand tools, laying out and fitting machine parts and other operations essential to machine shop work. The shop work is supplemented each quarter by a course in Shop Technology and Shop Mathematics. Open to vocational students.

Sec. 1 and 2, seven credits each quarter.
Sec. 3 and 4, six credits each quarter.

Schedule:

Sec. 1, T. Th. S. 8:00 to 11:00.
Sec. 2, M. W. F. 8:00 to 11:00.
Sec. 3, T. Th. 2:00 to 5:00.
Sec. 4, M. W. F. 2:00 to 5:00.

Associate Professor Newey and Mr. Stevens.

4. SHORT COURSE. Select work from Machine Shop Practice 1, 2, 3, including Shop Technology and Shop Mathematics. Sections 1, 2, 4, four credits. Open to vocational students.

Sec. 1 or 4, Fall and Spring quarters.
Sec. 1, 2 or 4, Winter quarter.

Schedule:

Sec. 1, T. Th. S. 8:00 to 11:00.
Sec. 2, M. W. F. 8:00 to 11:00.
Sec. 3, T. Th. 2:00 to 5:00.
Sec. 4, M. W. F. 2:00 to 5:00.

Associate Professor Newey and Mr. Stevens.

5. ADVANCED SHORT COURSE. Select work from Machine Shop Practice, including Shop Technology and Shop Mathematics. Prerequisite, Short Course. Four credits. Open to vocational students.

Sec. 2 or 4, Fall and Spring quarters.
Sec. 2 or 4, Winter quarter.

Schedule:

Sec. 1, T. Th. S. 8:00 to 11:00.
Sec. 2, M. W. F. 8:00 to 11:00.
Sec. 3, T. Th. 2:00 to 5:00.
Sec. 4, M. W. F. 2:00 to 5:00.

Associate Professor Newey and Mr. Stevens.

6, 7, 8. GENERAL MACHINE WORK. Advanced lathe and planer work, milling, gear cutting, tool grinding, the building of simple machines and automobile parts. Throughout the course demonstrations and lectures are given on modern shop methods. Prerequisites, Machine Shop Practice 1, 2, 3.

Sec. 1 and 2, six credits each quarter.
Sec. 3 and 4, five credits each quarter.

Associate Professor Newey and Mr. Stevens.

SENIOR COLLEGE COURSES.

101, 102, 103. Tool Making. These courses include practice in making and grinding arbors, standard gauges, taps, reamers, milling cutters, etc., and in planning and building special tools. Prerequisites, General Machine Work 6, 7, 8.

Sec. 1 and 2, six credits each quarter.

Sec. 3 and 4, five credits each quarter.

Associate Professor Newey and Mr. Stevens.

Mechanism. Time and credit to be arranged.

Note: Not less than two credits will be given.

MECHANICAL DRAWING

Assistant Professor Feldman.
Professor Ray B. West.

Drawing rooms are open daily from 8:00 to 5.00. Supervised instruction given from 8:00 to 11:00. Three hours a week are required for each credit.

JUNIOR COLLEGE COURSES

1. Farm Construction. Working drawings of feed racks, gates, etc., in straight line projection. Lettering and reading of plans. Fall or Winter quarter. Two credits.

Lec. T. 10:00.

2. Farm Structures. Drawing and designing of poultry houses, swine houses, granaries, garages and other farm buildings. Prerequisite, 1. Winter or Spring quarter. Two credits.

Lec. T. 10:00.

3. MAPS AND TOPOGRAPHICAL DRAWING. Drawing of grounds, gardens and farm maps. Prerequisite 2. Spring quarter. Two credits.
Lec. T. 10:00.

4. DRAWING OF SHOP EXERCISES. Freehand sketching and rendering in straight line projection. Reading of plans and lettering. Fall or Winter quarter. Two credits.
Lec. T. 10:00.

5. STRUCTURAL DETAILS. Drawing of walls, windows, roof details and furniture, forging exercises and machine parts. Prerequisite 4. Winter or Spring quarter. Two credits.
Lec. T. 10:00.

6. BUILDING DETAILS. Drawing of simple plans, elevations and details. Problems in carriage and automobile bodies and machine parts. Spring quarter. Two credits.
Lec. T. 10:00.

7. THE USE AND CARE OF INSTRUMENTS. Applied geometry and orthographic projection. Fall or Winter quarter. Three credits.
Lec. T. 10:00.

8. DEVELOPING SURFACES AND INTERSECTIONS. Winter or Spring quarter. Three credits.
Lec. T. 10:00.

9. PICTURAL REPRESENTATION. Isometric, oblique and cabinet projections; perspective and shades and shadows. Spring quarter. Three credits.
Lec. T. 10:00.

10. Architectural Construction. Designing a cottage, awing the plans, elevations and sections. Details of walls, f, cornice, windows, doors, stairs, fireplace and cabinets and aking specifications and bill of materials. Fall, Winter and pring quarters. Five credits each quarter.

11. Orders of Architecture. Studies and drawing and ndering in wash and water colors of problems of the different assic orders. Five credits.

12. Architectural Design. This course consists of the tudy and rendering of original designs by the students. These tudies are partly from programs issued by the instructor and artly from the programs issued by the Beaux Arts Institute of esign of New York. The finished designs of the latter group re submitted to the juries in New York in competition with those f students of other schools of architecture.

Design Class C. Order problems of Beaux Arts Institute r similar problems arranged by the instructor. Three hours aily for six weeks. Three credits.

Design Class B. Class B plan problems and Class B sketch roblems of the Beaux Arts Institute or similar problems arranged y the instructor. Three hours daily for six weeks. Three redits.

Design Class A. Class A. Plans and Sketch problems of the Beaux Arts Institute or similar problems arranged by the instructor. Three hours daily for six weeks. Three credits.

13. Machine Drafting. Drawing of fastenings such as bolts, screws, keys, rivets and pipe. Any quarter. Three credits.

14. DETAIL DRAWINGS. Drawing of details and sections and making of assembly drawings from details and dimensioning studies. Any quarter. Three credits.

15. WORKING DRAWINGS. Special representation, drawing of cams and gears and assembly and detail drawings. Any quarter. Three credits.

16. MAP AND TOPOGRAPHICAL DRAWING. Plotting of surveys. Drawing of topographical symbols, contours and profiles. Lettering and tinting. Prerequisite, Mechanical Drawing 1, 2 or 3.. Three hours in drawing for one credit. Student may elect one or more credits. Any quarter.

17. ENGINEERING DRAWING. The drawing of engineering structures in orthographic projection. Any quarter. Three credits.

18. DESCRIPTIVE GEOMETRY. Of practical value to the mechanic and engineer in reading working drawings and in solving graphical problems. The point, line, plane and simple solid are studied.

19. LETTERING AND DESIGNING OF COMMERCIAL AND OTHER FORMS. Freehand sketching and lettering, making of geographical charts and ploting of data. Designing accounting organizations and statistical forms. Three hours in drawing for one credit. Student may elect one or more credits. Any quarter.

Note: Credit will be allowed in Mechanical Drawing in proportion to the amount of work completed.

WOODWORK AND HOUSEBUILDING

Associate Professor Hansen.
Mr. Swenson.
Mr. Hughes.

The shops are open daily, except Saturday, from 8:00 to 12:00, and from 2:00 to 5:00, and Saturday from 8:00 to 12:00. The courses scheduled may be taken at any time when the shops are open.

(Lectures are included in the laboratory periods.))

VOCATIONAL COURSES.

a. Fundamentals. Scarfing, mortising, dovetailing and jointing. Proper handling of tools is emphasized.

b. Panels, sashes, doors and rafter cutting; also thorough practice in tool sharpening.

c. Feedhoppers, trestles, gates, grindstone frames, beehives, etc., or simple furniture.

Vocational courses five days a week, three hours daily. Five credits. From one to five credits given according to the amount of work done. *Associate Professor Hansen.*

JUNIOR COLLEGE COURSES.

1, 2, 3. Machine Work. The use of wood-working machinery building a modern work bench and tool chest, also elementary and advanced wood turning. Prerequisite, Carpentry c. Three hours daily and five days a week. Fall, Winter and Spring quarters. Five credits each quarter. *Mr. Swenson.*

4. Wood Finishing. Paints, pigments, oils and their manufacture. Water, oil and spirit stains; wash finish. Varnishes—kinds and their preparation; rubbing and hand polish. May be taken any quarter if four or more students apply. One lecture a week, one quarter. One credit.

Time to be arranged with the instructor.

Associate Professor Hansen.

SENIOR COLLEGE COURSES.

101, 102, 103. Fancy Furniture. Mahogany and other expensive woods are used; veneering, inlaying and hand polishing. Prerequisite, Carpentry 6. Three hours daily, any five days a week. Fall, Winter and Spring quarters. Five credits each quarter. *Mr. Swenson.*

104. Wood Carving. Simple articles in straight and curved lines, simple conventional ornaments and natural foliage.

Time and credit to be arranged with the instructor.

Mr. Hughes.

105. Pattern Making. Time and credit to be arranged with the instructor. *Mr. Swenson.*

106. Advanced Short Course. For students who do not fit into the regular schedule. Prerequisite, work equivalent to that listed under Junior College Courses. *Mr. Swenson.*

107. Picture Framing. Making of simple mouldings and frames, finishings, mat cutting, mounting and fitting. May be had in connection with the advanced courses in woodwork.

Time and credit to be arranged with the instructor.

Mr. Swenson.

HARNESS REPAIRING

Mr. Swenson.

VOCATIONAL COURSE.

a, b, c. Harness Repairing. Designed to fit the student o do ordinary repairing of harnesses, saddles, etc., on the farm. Splicing, riveting, sewing, cleaning, oiling and the general upkeep of the harness and leather goods. One three hour laboratory period each week throughout the Fall, Winter and Spring quarters. One credit each quarter. *Mr. Swenson.*

METHODS IN EXPERIMENTATION AND EXTENSION

METHODS IN EXPERIMENTATION.

GRADUATE COURSES.

201. Methods and Principles of Research as Applied to Agriculture. Work done in this course may be used to apply toward the thesis for the master's degree. Any quarter.

Hours and credit to be arranged.

The Experiment Station Staff.

211. Methods and Principles of Research as Applied to Home Economics. Experimental work in home problems in bacteriology, infant feeding, household chemistry, in the working out of home equipment or in any problems brought in from the field. Work done in this course may be used to apply toward the thesis for the master's degree. Any quarter.

Hours and credit to be arranged.

The Experiment Station Staff.

METHODS IN EXTENSION..

GRADUATE COURSES.

201. METHODS OF EXTENSION WORK. Intensive study o the problems and functions of county agricultural agents, county home demonstration agents, agricultural specialists, home economics specialists, club leaders and state extension leaders. The following topics will be covered: A brief history of extension work; present organization and status of extension work; choosing the local program of work; developing projects; training local leaders; follow-up methods; methods in conducting meetings, demonstrations, exhibits, field trips, and contests; office organization, equipment, etc.; report writing, letter writing, and preparation of illustrative and other publicity material; the outlook for extension workers. Field trips will be made into those parts of the State where the most successful extension work is being done. Much practical experience. Any quarter. Credit to be arranged. ranged.

Hours to be arranged. *Professor Evans.*

211. RESEARCH IN EXTENSION METHODS. Any quarter. Time and credit to be arranged. *Professor Evans.*

Note: Students who are preparing for positions as extension workers should include Education 101, 102, 103, 111, 113, and Extension Methods 201 and 211. Extension Methods 201 is designed especially to fit teachers in agriculture and home economics for the more lucrative positions in the extension service and to enable those already in extension work to reach the higher positions in the field.

For closely related course see Education 113.

MILITARY SCIENCE AND TACTICS

ROFESSOR ALEXANDER C. SULLIVAN, Major, Coast Artillery Corps, U. S. A.

ROFESSOR CHARLES CHALLICE, ..JR., Captain,, Quartermaster Corps, U. S. A.

NSTRUCTOR JAMES MCGRATH, Post-Comm. Sgt. (Retired), U. S. A.

NSTRUCTOR EUGENE J. CALLAHAN, Sgt Coast Artilery Corps, U. S. A.

NSTRUCTOR FRANK H. HEMMER, Sgt. Infantry, U. S. A.

The Agricultural College of Utah is a land grant institution nder the provisions of an Act of Congress of July 2nd, 1862, onating land for the establishment of colleges where the leading bject shall be practical instruction in Agriculture and the Mehanic Arts, including Military Tactics.

A two years course of military training is required at this nstitution of all physically fit male students as a prerequisite for raduation.

This training is an excellent course in leadership, in the cience of handling men, a knowledge of which is necessary in ll walks of life after graduation.

The War Department has agreed to permit the course of military raining at this institution to be devoted to training the students to be Reserve Officers of the United States Army. Two branches of the Service or Reserve Officers Training Corps units have been established here: Coast Artillery and Motor Transport. The entire organization is designated officially as "The Reserve Officers Training Corps."

Upon entering the institution, each student is permitted to select the R. O. T. C. unit he wishes to follow.

Each R. O. T. C. unit has two courses—the Basic Course and the Advanced Course. In the first year of military training the basic course is identical for both units. It consists of a drill period of three hours duration from 10:00 A. M. to 1:00 P. M. each Thursday throughout the year.

During the Winter quarter, the last hour of the drill period for Freshmen is devoted to lectures and instruction on the following subjects:

Military Courtesy and Discipline.
Personal Hygiene.
First Aid and Sanitation.
Orders and Messages.
Common Law.
Military Law.
The Army Rifle.
Interior Guard Duty.
Care and Handling of Arms and Equipment.
Pointing and Aiming Drill.

During the Winter quarter and part of the Spring quarter, the last hour of the drill period for Sophomores of each unit is devoted to lectures and instruction on the following subjects:

COAST ARTILLERY UNIT:

37 mm. gun (Inf.)
Browning Automatic Rifle.
Browning Machine Gun.
Powders, Projectile, Primers and Fuzes.
Military Explosives.
Azimuth Instrument and B. C. Telescope.
Whistler—Hearn Plotting Board.
Deflection Board, Pratt Range Board.
Wind Component Indicator.
Coast Artillery Plotting Room Drill.
Artillery Type Telephones.
Ten Ton Artillery Tractor.
Artillery Repair Truck.
8-inch Howitzer.
155 mm. G. P. G. (Gun).
Submarine Mines.
Warships.
Bausch—Lomb Self Contained Range Finder.

MOTOR TRANSPORT UNIT:

The Motor Transport Corps.
The Motor Transport Company.
General Principles of Convoy.
Care of Equipment.
Signals and Road Rules.
Map Reading.
Loading.
Convoy Problems.
Knotting and Splicing.
Technical Inspections.
The Gasoline Engine.
Types of Motors.
Timing and Balancing.
Ignition.
Fuel System.
Clutches.
Transmissions.
The Drive.
The Differential.

Students in the Basic Course who so elect may take the six weeks course of instruction at a Basic Camp during the summer following the first or second year of the Basic Course. Transportation to and from the camp, food, clothing, medical and dental treatment will be furnished free by the Government.

After completing the two years Basic Course of instruction, students who have successfully qualified, are eligible to continue their military education in the Advanced Course of the Unit which they selected in their Freshmen year. To be thus eligible, students must be considered qualified by the President of the Agricultural College of Utah and by the Professor of Military Science and Tactics.

Students who elect the Advanced Course agree in writing to pursue the course until graduation and to attend the six weeks course of practical instruction known as the "Advanced Summer Camp" which starts about the middle of June, between the Junior and Senior Years. The student who pursues the Advanced Course receives commutation of rations, about 40 cents a day, until graduation. Travel to and from the camp, rations, clothing, housing, and medical attention are provided free by the United States Government. In addition, the Advanced student receives $1.00 a day while at camp.

During the summer of 1922, the Coast Artillery Basic and Advanced Camps were held at Fort Worden, near Seattle, Washington. The Motor Transport Basic and Advanced Camps were held at the Presidio of San Francisco, California.

During the Junior and Senior years, the advanced students in addition to acting as cadet officers at the Infantry drills of the Basic Course students, and thus receiving practical instruction in the science of handling men, receive instruction three times per week in the following subjects:

COAST ARTILLERY UNIT:

Coast Artillery Drill Regulations.
Gunnery for Heavy Artillery.
Orientation and Surveying.
Minor Tactics.
Military Law.
Military Policies of the United States.
Rules of Land Warfare.
Heavy Artillery Material.
Tactical Employment of Heavy Artillery.

Note: A knowledge of mathematics up to and including plane trigonometry is essential before enrollment in the Advanced Coast Artillery Course.

MOTOR TRANSPORT UNIT:

Minor Tactics.
Manual of the Motor Transport Corps.
Convoy Problems.
Administration and Maintenance.
Transportation Surveys.
Motor Vehicle Construction and Design.
Organization Operation.
Military Policies of the United States.
Military Law.
Rules of Land Warfare.
Advanced Automotive Engineering.
Classroom and Shopwork.
Driving and Convoy Practice.

Upon the satisfactory completion of the Advanced Course, the student, if he so desires, and is so recommended by the President of the Agricultural College of Utah and the Professor of Military Science and Tactics, will be given a commission as Second Lieutenant in the Officers' Reserve Corps in the branch in which he is qualified. He is authorized, when in uniform, to wear the same uniform and identical insignia as a Second Lieutenant of the same branch of the Regular Army.

The student who has accepted a commission in the Officers' Reserve Corps of the United States Army will be obliged to attend a two weeks' camp each summer unless he is excused for urgent reasons. His transportation to and from the camp will be paid by the Government and while at the camp he will receive the full pay of his rank in the Army. Reserve Officers are assigned by the Corps Area Commander to a unit of the Organized Reserve near their place of residence, which will be immediately mobilized upon the proclamation of the President of the United States that a state of war or national emergency exists and that the Organized Reserve Forces of the United States Army are to be mobilized.

The Basic Course grants three credits per quarter, which is in addition to the 180 academic credit hours required for graduation.

Basic Course:

Thursday 10:00 a. m. to 1:00 p. m.

The Military Department.

The Junior and Senior Advanced students receive four credits each quarter, or 12 credits per year. Counts towards the 180 hours required for graduation. In the School of General Science, Advanced Military Science and Tactics may be submitted as a Minor Subject for graduation.

Advanced Course:

Juniors: Thursday 10:00 a m. to 1:00 p. m. M. W. F. 10:00 a. m. to 11:00 p. m.

Seniors: Thursday 10:00 a. m. to 1:00 p. m. M. W.
11:00 a. m. to 12:00 noon.

The Military Departmen

Note: Courses are numbered by quarters as follows:

Coast Artillery Basic:—Military Science 1, 2, 3, 4, 5,

Motor Transport Basic:—Military Science 11, 12, 13, 1
15, 16.

Coast Artillery Advanced:—Military Science 101, 102, 10
104, 105, 106.

Motor Transport Advanced:—Military Science 111, 112, 11
114, 115, 116.

Example of the above:

A student taking the third quarter of the Coast Artiller Basic would be registered in Military Science 3.

A student taking the sixth quarter of the Motor Transpor Basic would be registered in Military Science 16.

A student taking the second quarter of the Coast Artiller Advanced course would be registered in Military Science 102.

A student taking the fourth quarter of the Motor Transport Advanced course would be registered in Military Science 114.

MODERN LANGUAGES AND LATIN

PROFESSOR ARNOLD.

JUNIOR COLLEGE COURSES.

FRENCH.

1, 2, 3. FIRST YEAR FRENCH. Walther and Ballard's Beginner's French for grammar and conversation. About 400 pages easy prose are read. Fall, Winter and Spring quarters. Three dits each quarter.

M. W. F. 8:00. *Professor Arnold.*

4, 5, 6. SECOND YEAR FRENCH. French Composition for ammatical review and writing in French; Lavisse's Histoire de ance for conversation; translating works of nineteenth century thors. Prerequisite, French 1, or two years high school French. ll, Winter and Spring quarters. Three credits each quarter.

M. W. F. 10:00. *Professor Arnold.*

GERMAN.

1, 2, 3. FIRST YEAR GERMAN. Grammar, reading and conrsation. Fall, Winter and Spring quarters. Three credits each arter.

T. Th. S. 8:00. *Professor Arnold.*

SPANISH.

1, 2. FIRST YEAR SPANISH. Grammar, conversation and ading. Fall and Winter quarters. Three credits each quarter.

T. Th. S. 9:00. *Professor Arnold.*

3. FIRST YEAR SPANISH. Same course repeated. Spring uarter. Three credits.

M. W. F. 11:00. *Professor Arnold.*

4. SPANISH. Business correspondence, reading and converation. Spring quarter. Three credits.

T. Th. S. 9:00. *Professor Arnold.*

LATIN.

1, 2. 3. Grammar and reading and study of English vocabulary. Fall, Winter and Spring quarters. Two credits each quarter.

T. S. 10:00. *Professor Arnold.*

PHILOLOGY 1. Intensive study of English word formation, derivation, synonyms, and figurative language in order to acquire a large English vocabulary and readily to understand scientific terms. Especially recommended for students in Historical Geology. Winter quarter. Three credits.

M. W. F. 11:00. *Professor Arnold.*

SENIOR COLLEGE COURSES.

FRENCH.

101, 102, 103. Reading course in Nineteenth Century plays. Prerequisite, two years of college French or three of high school. Fall, Winter and Spring quarters. One credit each quarter.

T. 12:00. *Professor Arnold.*

104, 105, 106. FRENCH CONVERSATION. Games, dictation, learning of a one act play and writing business letters. Prerequisite, two years of college French or three years of high school. Fall Winter and Spring quarters. One credit each quarter.

Th. 12:00. *Professor Arnold.*

107, 108, 109. Research work in French periodicals and books on any one of the following subjects:

a. Landscape gardening.
b. Percheron horses.

c. French finance.
d. French scientific reports.
e. Home economics.
f. Aviation.

The work will consist of outside reading and weekly reports to the instructor. Prerequisite, two years of college French or three years of high school. Fall, Winter and Spring quarters. One credit each quarter.

Hours to be arranged with instructor. *Professor Arnold.*

GERMAN.

101, 102, 103. SCIENTIFIC GERMAN. Rapid reading of scientific texts in different subjects according to the course of each student. Specially recommended for students who have had two years work in German in high school or college and are planning to do advanced work in agronomy, botany or other sciences. Fall, Winter and Spring quarters. One credit each quarter.

Hours to be arranged with instructor. *Professor Arnold.*

MUSIC

PROFESSOR THATCHER.
ASSOCIATE PROFESSOR JOHNSON.
MR. ....

Students may enter the College orchestra or band without taking any other music course. One credit each quarter.

1, 2, 3. ELEMENTARY THEORY. Reviews the ground work necessary for students desiring a thorough knowledge of music. Keys, scales, intervals, melody writing, sign singing. Fall, Winter and Spring quarters. Two credits each quarter.

T. Th. 9:00. *Professor Thatcher.*

4, 5, 6. APPRECIATION AND HISTORY OF MUSIC. From text. Fall, Winter and Spring quarters. Three credits each quarter.
M. W. F. 11:00. *Professor Thatcher.*

7. ANALYSIS AND CRITICISM. Arranged to supplement private music study. Fall quarter. Two credits.
T. Th. 10:00. *Professor Thatcher.*

8. AMERICAN MUSIC. Winter quarter. Two credits.
T. Th. 10.00. *Professor Thatcher.*

9, 10, 11. ELEMENTARY HARMONY. Text used. Home study, 6 hours as a minimum. Applied music, individual and ensemble. Prerequisite, 2 years' study, piano or equivalent. Fall, Winter and Spring quarters. Five credits each quarter.
M. W. F. 10:00. *Professor Thatcher.*

12, 13, 14. ADVANCED HARMONY AND ANALYSIS. Applied music, individual and ensemble. Prerequisite, Music 3. Home study increased for this course. Five hours, Fall, Winter and Spring quarters. Five credits each quarter.
Hours to be arranged. *Professor Thatcher.*

15, 16, 17. COUNTERPOINT AND SMALL FORMS. Applied music, individual and ensemble. Prerequisite, Music 4. Fall, Winter and Spring quarters. Five credits each quarter.
Hours to be arranged. *Professor Thatcher.*

18, 19, 20. ORCHESTRA CLASS. Provides study of standard orchestra works. Two hours a week. Fall, Winter and Spring quarters. One credit each quarter.
Hours to be arranged. *Professor Thatcher.*

21, 22, 23. CHOIR. To furnish music for chapel exercises and special occasions. Three hours per week. Fall, Winter and Spring quarters. One credit each quarter.
M. W. F. 12:00. *Associate Professor Johnson.*

24, 25, 26. GLEE CLUB. An organization of men. Membership is limited in number and decided by competition. Three hours a week. Days and hours of practice to be arranged. Fall, Winter and Spring quarters. *Associate Professor Johnson.*

27, 28, 29. LADIES' CHORUS. Membership is limited and decided by competition. Three hours a week. The Glee Club and Ladies' Chorus join in giving the college opera. Fall, Winter and Spring quarters. *Associate Professor Johnson.*

30. PUBLIC SCHOOL MUSIC. Ability to play and sing required. Applied music in Choir or Glee Club. Deals with theory and methods of teaching, music supervision, programs. Three hours per week. Any quarter. Two credits.
Hours to be arranged. *Associate Professor Johnson.*

31, 32, 33. BAND. To provide for study and practice of band instruments and to furnish music for athletic meets and outdoor gatherings. Fall, Winter and Spring quarters. One credit each quarter.

Private instruction may be had (the pupil paying the teacher's fee) in the following: Voice, Piano, Violin, Orchestral and Band Instruments. One credit a quarter in each course will be allowed if pupil is enrolled in Applied Music only.

PHYSICAL EDUCATION

PROFESSOR PRESTON, M. D.
Medical Supervisor of Students.
ASSOCIATE PROFESSOR COOPER.
ASSISTANT PROFESSOR JENSEN.
ASSISTANT PROFESSOR ROMNEY.

Physical Education is arranged to give each student sufficient exercise to maintain physical health and a high degree of mental efficiency.

Gymnasium work is required of all men during their entire college course and of all women during two years of their attendance.

All students before they are allowed to do physical work on the floor or on the athletic field must be examined by the school physician.

Adequate opportunity is afforded students to take part in class games and contests. Inter class sports are open to students who have never won a letter or who are not trying for the teams.

Athletic competition with colleges and universities in the State and Rocky Mountain Conference forms an interesting part of the work. The promotion of honor and college spirit through athletic games and meets constitutes an important feature of the department.

PHYSICAL EDUCATION FOR MEN

1. FOOTBALL. Practice in football technique, equipment; theory of defensive and offensive play; study of rules, duties of officials, schedule making; general preparation for coaching. Fall quarter.

Daily, 4:00. *Assistant Professor Romney.*

2. Track and Field Athletics. Instruction and practice; how to choose men for different events; track rules and duties of officials; theory of training for endurance, speed, skill, strength; problems of temperament, climate, traveling and professionalism. Spring quarter.

Daily, 4:00. *Assistant Professor Romney.*

3. Basketball. Instruction and practice; history, principles and technic of the game; methods of training and coaching; study of rules and duties of officials. Winter quarter.

Daily, 4:00. *Assistant Professor Romney.*

4. Baseball. Instruction and practice. Spring quarter.

Daily, 4:00. *Assistant Professor Romney.*

5, 6, 7. Gymnasium Work. Required of all students. Swedish gymnastics, callisthenic drills and gymnasium games. Students taking the course must learn to swim before receiving credit. Fall, Winter and Spring quarters. One-half credit each quarter.

Sec. 1, M. W. F. 9:00.
Sec. 2, T. Th. S. 9:00.
Sec. 3, M. W. F. 10:00.
Sec. 4, T. Th. S. 10:00.
Sec. 5, M. W. F. 11:00.
Sec. 6, M. W. F. 12:00.
Sec. 7, M. W. F. 2:00.

Assistant Professor Jensen.

8, 9, 10. Advanced Swimming. The course covers the methods of life saving, endurance in swimming, resuscitation. Prerequisite, the ability to swim all the ordinary strokes. Fall, Winter and Spring quarters. One-half credit each quarter. Three times a week.

Hours to be arranged. *Assistant Professor Jensen.*

11. Games. A practical course designed to make students proficient in playing the more common games.

M. W. F. 3:00. *Assistant Professor Jensen.*

12. Gymnastics. A course in heavy apparatus work. The student will be required to do regular work on Horse, Parallel Bars, Buck, rings, etc. Winter quarter. One-half credit each quarter.

Daily, except Saturday, 5:00.

Assistant Professor Jensen.

13. Advanced Gymnastics. Open to juniors and seniors and to those students who expect to teach Physical Education or do coaching work. Three credits.

Daily, except Saturday. Hours to be arranged.

Assistant Professor Jensen.

PHYSICAL EDUCATION FOR WOMEN

Miss Cooper.

The chief purpose of the department is for the physical betterment of the women of the Institution. It strives to develop such physical habits as make for vigor and efficiency and counteract the sedentary life of the student.

10, 11, 12. Elementary Gymnastics. A course in elementary gymnastics planned to meet the needs of those who have had no physical education. For all girls registered as vocational students. Fall, Winter and Spring quarters. One credit each quarter.

T. Th. 12:00. *Miss Cooper.*

13, 14, 15. PRACTICAL GYMNASTICS. Designed to furnish activity of such a kind and in such a manner as will secure erect carriage and good motor control. The course consists of lectures in hygiene, general gymnastics, folk dancing, plays and games. Required for graduation. Fall, Winter and Spring quarters. One credit each quarter.

Sec. 1, T. Th. S. 11:00.
Sec. 2, M. W. F. 10:00. *Miss Cooper.*

16, 17, 18. ADVANCED PRACTICAL GYMNASTICS. A continuation of Physical Education 13, 14, 15. Required for graduation. Prerequisite, Physical Education 13, 14, 15. Fall, Winter and Spring quarters. One credit each quarter.

Sec. 1, T. Th. S. 10:00.
Sec. 2, M. W. F. 11:00. *Miss Cooper.*

31, 32, 33. AESTHETIC DANCING. A course in dancing technic, fundamentals of interpretive work and descriptive dances. Prerequisite, Physical Education 13, 14, 15. Fall, Winter and Spring quarters. One credit each quarter.

M. W. F. 2:00. *Miss Cooper.*

41, 42, 43. PLAYS AND GAMES. A practical course designed to make students more proficient in playing the more common competitive games such as baseball, volley ball, hockey, tennis and hand ball. Prerequisites, Physical Education 13, 14, 15 and 16, 17, 18. Fall, Winter and Spring quarters. One credit each quarter.

T. Th. 2:00. *Miss Cooper.*

51. SOCIAL DANCING. Instruction in standardized modern dances for men and women. Winter quarter.

W. 5:00. *Miss Cooper.*

61, 62, 63. INTERPRETIVE DANCING. A course in advanced technic, descriptive dramatic dancing and dance composition. Prerequisite, Physical Education 31, 32, 33. Fall, Winter and Spring quarters. One credit each quarter.
M. W. F. 3:00. *Miss Cooper.*

PHYSICS

PROFESSOR FRANK L. WEST.
ASSOCIATE PROFESSOR GARDNER.
MR. EDLEFSEN.

JUNIOR COLLEGE COURSES.

1, 2, 3. GENERAL PHYSICS. The elements of physics, including mechanics, heat, electricity and magnetism, sound and light. Physics 2 is open to Winter quarter students. Fall, Winter and Spring quarters. Three credits each quarter.
Lec. T. Th. 9:00; lab. M. T. W. Th. 2:00 to 5:00.
Professor West.

11. TELEGRAPHY. Morse or International code. Any quarter. One credit a quarter.
Not given 1922-23. *Professor West.*

13. HOUSEHOLD PHYSICS. Four credits. Fall quarter.
Not given 1922-23. *Professor West.*

16. METEROLOGY, or the Physics of the Atmosphere. The methods of weather observations, predictions, frost warnings and the relation of climate to agriculture. Prerequisite, elementary physics. Spring quarter. Three credits.
M. W. F. 9:00. *Professor West.*

20. APPLIED MECHANICS AND ENGINES. Prerequisite, high school physics. Fall quarter. Five credits.

Lec. M. W. F. 8:00; lab. M. W. or T. Th. 2:00 to 5:00.
Professor West.

21. APPLIED ELECTRICITY. Prerequisite, high school physics. Winter quarter. Five credits.

Lec. M. W. F. 8:00; lab. M. W. or T. Th. 2:00 to 5:00.
Professor West.

22. HEAT, LIGHT AND SOUND. Prerequisite, high school physics. Spring quarter. Five credits.

Lec. M. W. F. 8:00; lab. M. W. or T. Th. 2:00 to 5:00.
Professor West.

40. APPLIED ELECTRICITY. Prerequisite, elementary physics. Fall quarter. Three credits.
Mr. Edlefsen.
Not given 1922-23.

SENIOR COLLEGE COURSES.

105. CHEMICAL PHYSICS. Including the atomic theory, kinetic theory of gasses; gaseous, liquid and solid states; solutions; thermochemistry, electro chemistry and radio-activity, with special emphasis on osmotic pressure and diffusion. Prerequisites, elementary physics and chemistry. Fall and Winter quarters. Three credits each quarter.
Mr. Edlefsen.
Not given 1922-23.

107. ADVANCED LABORATORY WORK. One to five credits each quarter. Recommended to students taking Physics 40 and 105.
Mr. Edlefsen.
Not given 1922-23.

110. Direct and Alternating Current Electricity and Its Application to Industry. Fall and Winter quarters. Three credits each quarter.

M. W. F. 9:00. *Professor West.*

118. Thermodynamics and Physical Chemistry. Prerequisite or parallel, calculus.

Not given 1922-23. *Professor West.*

GRADUATE COURSES.

209, 210, 211. Theoretical Mechanics. Prerequisite, calculus. Fall, Winter and Spring quarters. Two credits each quarter.

T. Th. 8:00. *Professor Gardner.*

212, 213, 214. Hydrodynamics. Prerequisite, calculus. Fall, Winter and Spring quarters. Three credits each quarter.

M. W. F. 8:00. *Professor Gardner.*

225. Seminar. Fall, Winter and Spring quarters. Two credits each quarter.

T. Th. 11:00. *Professor West.*

PHYSIOLOGY

Professor Greaves.
Assistant Professor Carter.

JUNIOR COLLEGE COURSES.

1. Physiology. A discussion of movement, sensation, circulation, respiration, digestion, absorption, metabolism and excretion. Questions of hygiene are considered. Fall quarter. Five credits.

Daily, except Saturday, 9:00. *Assistant Professor Carter.*

2, 3. Physiology. The same subject matter is covered in this course as in Physiology 1, but it extends over two quarters, three days a week instead of for one quarter only, five days a week. Winter and Spring quarters. Three credits each quarter.
M. W. F. 10:00. *Assistant Professor Carter.*

SENIOR COLLEGE COURSES.

102. Physiology. An advanced course in special phases of physiology. Special emphasis will be placed upon the structure and function of the nervous system. Spring quarter. Three credits.
T. Th. S. 8:00. *Assistant Professor Carter.*

112, 113, 114. Physiology. A study of the chemical transformations going on in the animal. Fall, Winter and Spring quarters. Prerequisite, Bacteriology 110. Two credits each quarter.
T. Th. 11:00. *Professor Greaves.*

POLITICAL SCIENCE

Professor Daines.*
Professor Ricks.
Professor Israelsen.
Judge Bullen.

VOCATIONAL COURSE.

a, b. Business Law. The elementary principles of law relating to common business transactions, including contracts, sales, negotiable paper, agency, partnerships and corporations. Winter and Spring quarters. Three credits each quarter.
M. W. F. 8:00. *Judge Bullen.*

---

*On leave of absence.

JUNIOR COLLEGE COURSES.

1. Government of the United States. In this course the government of our country will be historically and critically studied. Special attention will be given to the origin and development of the Constitution. Fall quarter. Three credits.

M. W. F. 11:00. *Professor Ricks.*

2. State Government. The relationship of the States and the nation in our federal form of government. The government of Utah will receive special attention. Winter quarter. Three credits.

M. W. F. 11:00. *Professor Ricks.*

3. Political Parties. A study of the practices and importance of political parties. Special attention will be given to various schemes for political reform. Spring quarter. Three credits.

M. W. F. 11:00. *Professor Ricks.*

4. Municipal Government. A study of governmental practices and problems in American cities. Spring quarter. Three credits.

Not given 1922-23.

SENIOR COLLEGE COURSES.

101. Governments of Europe. A survey of European forms of government and their relationship to the government of the United States. Fall quarter. Three credits.

T. Th. S. 10.00. *Professor Ricks.*

102. THEORY OF AMERICAN GOVERNMENT. A study of the fundamental principles underlying American political institutions. Winter quarter. Three credits.

T. Th. S. 10:00. *Professor Ricks.*

103. WORLD POLITICS. A study of the methods and practices governing international relations. Spring quarter. Three credits.

T. Th. S. 10:00. *Professor Ricks.*

104, 105. COMMERCIAL LAW. The law of contracts, agency and commercial paper. Fall and Winter quarters. Three credits each quarter.

T. Th. S. 8:00. *Judge Bullen.*

106, 107. COMMERCIAL LAW. The law of debtor and creditor, sales, partnerships and corporations. Fall and Winter quarters. Three credits each quarter.

Not given in 1922-23. *Judge Bullen.*

111, 112. IRRIGATION INSTITUTIONS. (Given by the Departments of Irrigation and Drainage and Political Science, jointly.) Water right doctrines, laws governing the adjudication and acquirement of water rights and the distribution of water; organization of irrigation enterprises. Prerequisite or parallel, a general course in Economics or Sociology. Winter and Spring quarters. Three credits each quarter.

T. Th. S. 8:00. *Winter quarter, Professor Israelsen.*
Spring quarter, Judge Bullen.

PUBLIC SPEAKING

ASSISTANT PROFESSOR DUNN.

JUNIOR COLLEGE COURSES.

1, 2, 3. VOCAL INTERPRETATION. The vocal interpretation of the printed page. The aim of the course is to develop the ability to appreciate, intellectually and emotionally, any good literature and to interpret it so that others will appreciate it. Fall, Winter and Spring quarters. Three credits each quarter.

T. Th. S. 11:00. *Assistant Professor Dunn.*

4, 5. 6. EXTEMPORANEOUS SPEAKING. Practice in extemporaneous speaking with a definite study of those principles which make speech effective. Class limited to twenty-five. Fall, Winter and Spring quarters. Three credits each quarter.

M. W. F. 9:00. *Assistant Professor Dunn.*

SENIOR COLLEGE COURSES.

101, 102, 103. PUBLIC SPEAKING. A study of the principles of effective public speaking with practice in the preparation and delivery of speeches adapted to various audiences. Occasional practice assignments from the masterpieces of oratory. Prerequisites, Public Speaking 4, 5. 6. Fall, Winter and Spring quarters. Two credits each quarter.

T. S. 10:00. *Assistant Professor Dunn.*

104. INTERPRETATION OF POETRY. Oral interpretation of poetry, chiefly of the nineteenth century. Ballads, lyrics and epic forms will be studied with special emphasis upon the significance of rhythm. Prerequisite, Public Speaking 1, 2. 3. Fall quarter. Three credits.

M. W. F. 8:00. *Assistant Professor Dunn.*

105. INTERPRETATION OF SHAKESPEARE. A study of the dramatic reading of Shakespeare. Great scenes and characters will be chosen from different plays and at least one play will be read in its entirety. Prerequisite, Public Speaking 1, 2, 3. Winter quarter. Three credits.
M. W. F. 8:00. *Assistant Professor Dunn.*

106. DRAMATIC INTERPRETATION. A laboratory course in drama. Plays will be studied from the interpretative side. The class will vocally interpret scenes and plays assigned. Some work will be presented in public. Prerequisite, Public Speaking 1, 2, 3. Spring quarter. Three credits.
M. W. F. 8:00. *Assistant Professor Dunn.*

RANGE MANAGEMENT

ASSISTANT PROFESSOR BECRAFT.*

a. ELEMENTARY RANGE MANAGEMENT. Practical range problems, including methods of handling live stock. Winter quarter. Three credits.
(Not given 1922-23.) *Assistant Professor Becraft.*

b. ELEMENTARY FORESTRY. Practical phases of timber production and forest management, mensuration and protection. Winter quarter. Three credits.
(Not given 1922-23.) *Assistant Professor Becraft.*

JUNIOR COLLEGE COURSES.

1. RANGE MANAGEMENT. A general course including history, forage, plants, poisonous plants, range improvement, recon-

---

*On leave of absence.

naissance, carrying capacity and methods of handling live stock. Prerequisites, Botany 1 or 21, 22, 23. Winter quarter. Three credits.

(Not given 1922-23.) *Assistant Professor Becraft.*

7. FORESTRY. A general introductory course including silviculture and forest management, mensuration, utilization, protection and economics. Prerequisite, Botany 1, or 21, 22, 23. Winter quarter. Three credits.

(Not given 1922-23.) *Assistant Professor Becraft.*

SENIOR COLLEGE COURSE.

101. RESEARCH. For students specializing in Range Management.

Time and credit to be arranged with instructor.

(Not given 1922-23.) *Assistant Professor Becraft.*

RURAL PUBLIC HEALTH

PROFESSOR GREAVES.
PROFESSOR PRESTON, M. D.
PROFESSOR RAY B. WEST.
PROFESSOR FREDERICK.
PROFESSOR WHITACRE.
ASSISTANT PROFESSOR CARTER.
ASSISTANT PROFESSOR DANCY.

Students who wish to specialize in Public Health work will be required to present for graduation 24 hours credit to be selected from this group of subjects. They must include Rural Public Health 101 (Public Health and Preventive Medicine) in addition to the fulfilling of all other requirements.

JUNIOR COLLEGE COURSES.

1. First Aid. Treatment of emergencies and accidents. Two sections. Winter quarter. Two credits.

Hours to be arranged. *Professor Preston.*

2. Home Health and Nursing. Special emphasis on the prevention of disease and on the building up of the highest degree of health as the principal function of the home nurse. The treatment of functional disturbances, injuries, wounds, etc., receive due attention. Lectures, discussions and laboratory demonstrations. The reading of reference works, and special reports are required. Winter and Spring quarters. Three credits each quarter.

Hours to be arranged. *Assistant Professor Dancy.*

Pathogenic Bacteriology (see Bacteriology 3).
Professor Greaves.

Physiology (see Physiology 1).
Assistant Professor Carter.

Parasitology (See Zoology 6). *Professor Hawley.*

SENIOR COLLEGE COURSES.

101. Public Health and Preventive Medicine. Lecture, demonstration and clinic course. Cases will be shown of the various communicable and preventable diseases. Emphasis will be placed upon their detection and diognosis and methods of prevention and eradication. Actual practice under direction of a physician in inspection and health supervision of schools will form a part of this course. Prerequisites, Physiology 2 and Bacteriology 8. One lecture and three hours clinic each week. Fall, Winter and Spring quarters. Hours to be arranged with instructor.
Professor Preston.

RURAL WATER SUPPLY AND WASTE DISPOSAL (See Rural Sanitation 106).
Professor West.

SANITATION (see Bacteriology 108, 109).
Professor Greaves.

ADVANCED PHYSIOLOGY (See Physiology 102).
Professor Greaves.

EUGENICS (See Zoology 112). *Assistant Professor Pack.*

DAIRY BACTERIOLOGY (lecture). (See Bacteriology 104.)
Assistant Professor Carter.

DAIRY BACTERIOLOGY (laboratory). (See Bacteriology 105.)
Assistant Professor Carter.

SPECIAL DIETS (see Foods 141). *Professor Whitacre.*

SANITARY STATISTICS (see Bacteriology 116).
Assistant Professor Carter.

SCHOOL SANITATION (see Bacteriology 14).
Professor Greaves.

SANITARY ANALYSIS (See Bacteriology 106).
Professor Greaves.

ADVANCED BIO-CHEMISTRY (see Bacteriology 113, 114, 115).
Professor Greaves.

SANITARY INSPECTION (see Veterinary Science 120).
Professor Frederick.

SOCIOLOGY

PROFESSOR HARRIS.

SENIOR COLLEGE COURSES.

101. RURAL SOCIOLOGY. A study of forces and conditions f rural life as a basis for constructive action in developing and aintaining a scientifically efficient and wholesome civilization the country will be made. It is aimed to train leaders so that he country can be made a desirable place in which to live as well s a place in which to make a living. Fall quarter. Three redits.

T. Th. S. 9:00. *Professor Harris.*

150. PRINCIPLES OF SOCIOLOGY. The foundations of sociol- gy will be studied in order that a plan of social progress may be ormulated. The problems of social origins, social structure, pub- ic opinion, social activities, social organization and social evolu- ion will be carefully considered. Winter quarter. Three redits.

T. Th. S. 9:00. *Professor Harris.*

160. APPLIED SOCIOLOGY. Social problems and social policy. An analysis of the causes, extent, treatment and prevention of poverty, defectiveness, vice and crime will be made. In connection with this course it is planned to visit the state industrial school, penitentiary, insane asylum, etc. Prerequisite, Sociology 150. Spring quarter. Three credits.

T. Th. S. 9:00. *Professor Harris.*

STENOGRAPHY AND TYPEWRITING

PROFESSOR P. E. PETERSON.
MISS THELMA FOGELBERG.

STENOGRAPHY

JUNIOR COLLEGE COURSES.

1, 2, 3. ELEMENTARY STENOGRAPHY. Thorough drill in the fundamental rules of the Isaac Pitman system of shorthand. Fall, Winter and Spring quarters. Four credits each quarter.

Daily except Thursday and Saturday 9:00.

Miss Fogelberg.

4, 5. ELEMENTARY STENOGRAPHY. Thorough drill in the fundamental rules of the Gregg system of shorthand. Winter and Spring quarters. Five credits each quarter.

Daily except Saturday 3:00. *Miss Fogelberg.*

6, 7, 8. ADVANCED STENOGRAPHY. Thorough review of the principles and drill in the attainment of speed. Open to both Gregg and Pitman students. Fall, Winter and Spring quarters. Four credits each quarter.

Daily except Thursday and Saturday 11:00.

Miss Fogelberg.

TYPEWRITING

JUNIOR COLLEGE COURSES.

Students must consult the instructor in order to arrange for section.

1, 2, 3. Beginning Course. Correct fingering and proper manipulation of the machine. Fall, Winter and Spring quarters. One credit each quarter.

Sec 1, 8:00 daily except Saturday.
Sec. 2, 9:00 daily except Saturday.
Sec. 3, 10:00 daily except Thursday.
Sec. 4, 11:00 daily except Thursday.
Sec. 5, 2:00 daily except Saturday. *Miss Fogelberg.*

4, 5, 6. Second Year Course. Daily exercises in which accuracy and speed are attained. Fall, Winter and Spring quarters. One credit each quarter.

Sec 1, 8:00 daily except Saturday.
Sec. 2, 9:00 daily except Saturday.
Sec. 3, 10:00 daily except Thursday.
Sec. 4, 11:00 daily except Thursday.
Sec. 5, 2:00 daily except Saturday. *Miss Fogelberg.*

TEXTILES AND CLOTHING

Professor Moen.
Professor Fletcher.
Miss Richardson.
Mrs. Ormsby.

Students who elect Textiles and Clothing as their major are required to complete the following courses: Textiles and Clothing 10 or its equivalent, 20, 105, 115, 125, 160. Students wishing to qualify as teachers of Textiles and Clothing must complete Education 120 and 122.

VOCATIONAL COURSE.

a, b, c. Hand Sewing and Garment Making. Training in hand and machine sewing. Drafting and use of commercial patterns. Selection of suitable materials for underwear and dresses. Design and construction of simple garments. Fall, Winter and Spring quarters. Two credits each quarter.

M. W. F. 10:00 to 12:00. *Mrs. Ormsby.*

Note: Students who wish to enter this class for the Winter quarter only may arrange with the instructor for extra work and receive one hour additional credit for same.

JUNIOR COLLEGE COURSES.

10, 11, 12. Review of Technic and Elementary Dressmaking. The application of hand and machine sewing to underwear, children's clothing and dresses. Drafting, designing, use of patterns and consideration of suitable materials. Prerequisites or parallel, Art 1, 2, 3. Sections 1, 2 and 3. Fall, Winter and Spring quarters. Two credits each quarter. Section 4. Winter and Spring quarters. Three credits each quarter.

Sec. 1, M. W. 2:00 to 5.00.	*Miss Richardson.*
Sec. 2, W. F. 10:00 to 1:00.	*Miss Richardson.*
Sec. 3, T. Th. 2:00 to 5:00.	*Mrs. Ormsby.*
Sec. 4, M. W. F. 2:00 to 5:00.	*Mrs. Ormsby.*

20, 21. Economics of Textiles. A study of the primitive forms and present methods of carding, spinning, weaving and finishing of cotton, wool, silk, linen and other important fibres; their properties and values in relation to manufacture and use; identification and grading of textile materials; qualitative testing; training in selection of ready-to-wear clothing and household furnishing; and clothing budgets. Prerequisite, Textiles and Clothing 10. Prerequisites or parallel, Economics 1, 2, 3. Fall and Winter quarters. Three credits each quarter.

M. W. F. 9:00. *Professor Moen.*

30, 31. Millinery. Designing and drafting paterns for hats; construction of frame from buckram, rice net and wire; various methods of covering foundations. Preparation of trimmings. Renovation of materials. Prerequisites or parallel, Art 1, 2, 3. Two credits each quarter.

Sec. 1, Fall and Winter quarters. T. Th. 2:00 to 4:00.
Sec. 2. Winter and Spring quarters, T. Th. 10:00 to 12:00.
Miss Richardson.

40, 41, 42. Handwork and Weaving. Lectures and laboratory work, including practical instruction in fundamental stitches applicable to household furnishing and clothing. The selection, preparation, care and repair of bed linen, table linen, draperies, etc. Simple weaving, crocheting, knitting and tatting. Prerequisites, or parallel, Art 112, 113, and Textiles and Clothing 10, 11, 12. Fall, Winter and Spring quarters. Two credits each quarter.
M. W. 2:00 to 5:00. *Professor Moen.*

SENIOR COLLEGE COURSES.

105. History of Costume. A study of Egyptian, Grecian, Roman, early and modern French costumes. Three lectures. Fall quarter. Three credits.
M. W. F. 10:00. *Professor Fletcher.*

115. Costume Design. Design in costume, rhythm of line, harmony of color. Sketching gowns and hats; study of styles suitable to various types. Winter quarter. Three credits.
M. W. F. 10:00. *Professor Fletcher.*

125. Application of Costume Design. Practical training in the use and adaptation to different individuals and purposes, design made in Textiles and Clothing 115, as well as designs

taken from current fashion magazines. Modeling in paper and crinoline and making of one costume. Prerequisites, Textiles and Clothing 10, 11, 12, 105, and 115, or their equivalents. Spring quarter. Three credits.

M. W. F. 9:00 to 11:00. *Professor Moen.*

160, 161, 162. ADVANCED DRESSMAKING. Problems in standardization of clothing; infants' and children's wardrobes; the application to costume of line and color harmony; pattern making and draping with materials; construction of dresses, with special emphasis on the technic of dressmaking. Prerequisites, Clothing 10, 20, 105, 115, 125. Fall, Winter and Spring quarters. Two credits each quarter.

T. Th. 2:00 to 5:00. *Professor Moen.*

For closely related course see Chemistry of Textiles (Chemistry 109).

Professor R. L. Hill

VETERINARY SCIENCE

PROFESSOR FREDERICK.

VOCATIONAL COURSE.

a. Elementary veterinary science for vocational students. Three hours' classwork with one clinic. Winter quarter. Four credits.

Lec. M. W. F. 10;00; clinic W. or Th. 2:00 to 5:00.

Professor Frederick.

JUNIOR COLLEGE COURSES.

10. VETERINARY ELEMENTS. Introduction to anatomy and physiology and the common ailments of domestic animals; the

ost prevalent diseases, their distribution, causes, symptoms, ourse, diagnosis and treatment; observation and practice in the ree weekly clinics. Fall or Winter quarter. Four credits.

Lec. T. Th. S. 8:00; clinic W. or Th. 2:00 to 5:00. Winter uarter.

Lec. M. W. F. 10:00; clinic W. or Th. 2:00 to 5:00. Winter quarter.

Professor Frederick.

20, 21, 22. COMPARATIVE ANATOMY. Especially for students in agriculture and animal husbandry; also students wishing to follow veterinary science. This course is supplemented with practical work in dissection and illustrated by skeletons and models. Fall, Winter and Spring quarters. Three credits each quarter.

Not given 1922-23.

30, 31. OBSTETRICS. Obstetrical anatomy, reproduction, hygiene of pregnant animals. Obstetric operations, accidents of parturition and diseases of the new-born. The college herd and the surrounding stock breeding community give ample oppor-tuniey for practical work. Winter and Spring quarters. Two credits each quarter.

T. S. 11:00. *Professor Frederick.*

40, 41, 42. PHYSIOLOGY. The vital functions of the different species of domestic animals and those of the human body are compared; the physical and chemical laws as related to physiology; the general properties of animal cells, their origin, development and growth; special physiology of the various organs and tissues of the animal body. Given if ten students register. Fall, Winter and Spring quarters. Three credits each quarter.

M. W. F. 9:00. *Professor Frederick.*

50, 51, 52. CLINICS. Free clinics at the hospital in which students of veterinary science must assist. The numerous cases represent all diseases common to this locality and furnish the clinic with abundant material for observation and practice. Hours and credits to be arranged. Fall, Winter and Spring quarters.

Clinic W. or Th. 2:00 to 5:00; Veterinary hospital.

Professor Frederick.

60. PRINCIPLES OF HORSE SHOEING. The anatomy and physiology of the horse's foot; the form of the foot and the direction of the limb; variations in the light of the foot, styles of going, shoeing of normal and irregular feet; winter shoeing; correction of defects in gait and methods of shoeing hoofs defective in form or diseases. Winter quarter; repeated Spring quarter. Three credits.

T. Th. S. 9:00. *Professor Frederick.*

SENIOR COLLEGE COURSES.

107. HYGIENE AND INFECTIOUS DISEASES. A discussion of water and food supply disinfection, care and management of animals and feeding of sick animals. The common infectious diseases prevalent here. Methods which should be adopted in their control and eradication. Tests applied for diagnosis, vaccination and serum treatment of animals. Winter or Spring quarter. Four credits.

Lec. T. Th. S. 8:00; clinic 2:00 to 5:00. Winter quarter.
Lec. M. W. F. 10:00; clinic 2:00 to 5:00. Spring quarter.

Professor Frederick.

118, 119. ANATOMY AND PHYSIOLOGY. A study of the form, structure and functions of the animal body. Attention is given to all domestic animals and students are required to locate and point out the parts related to the form, movement and utility of the animal. Fall and Winter quarters. Three credits each quarter.

Lec. T. S. 10:00; clinic W. or Th. 2:00 to 5:00.

Professor Frederick.

120. SANITARY INSPECTION. Inspection of slaughter houses, packing houses, butcher shops, etc., and means of detection of communicable diseases and spoilage in meat products. Prerequisite, Bacteriology 2. One quarter. Three credits.

Hours to be arranged.

Professor Frederick.

ZOOLOGY

PROFESSOR HAWLEY.
ASSISTANT PROFESSOR PACK.

See Entomology for related work.

JUNIOR COLLEGE COURSES.

1, 2. ELEMENTARY GENERAL ZOOLOGY. A study of morphology, physiology, differentiation, adaptation and other zoological principles. A brief survey of the animal kingdom is undertaken so that the student will be able to identify the general groups. Intended for those who have not studied zoology before and who desire only a general view of the subject. This course is recommended for all students except those in Agriculture and General Science who desire a more comprehensive course. Sec. 1, Fall and Winter quarters; Sec. 2, Winter and Spring quarters. Three credits each quarter.

Sec. 1, Lec. T. Th. 8:00; lab. T. or F. 2:00 to 5:00.
Sec. 2, Lec. W. F. 10:00; lab. Th. or F. 2:00 to 5:00.

Professor Hawley and Assistant Professor Pack.

3, 4. General Zoology. A systematic study of the animal kingdom, its general classification and the relation of the various groups of animals to each other. Emphasis is placed upon structural characteristics, development, function and relation of organs in the different groups. Winter and Spring quarters. Five credits each quarter.

Lec. T. Th. S. 9:00; lab. M. W. 2:00 to 5:00.

Assistant Professor Pack.

5. Economic Zoology. Study of the feeding and breeding habits of intermountain vertebrates and their economic relation to agricultural interests. Methods for the control of injurious vertebrates and for the encouragement of beneficial ones are considered. Spring quarter. Four credits.

Not given 1922-23.

6. Parasitology. The classification, morphology and life history of human parasites. The disease-producing protozoans, flukes, tapeworms and roundworms receive special study. Anthropods as external parasites and carriers of pathogenic organisms receive attention. Fall quarter. Four credits.

Lec. T. Th. S. 9:00; lab. M. 2:00 to 5:00.

Professor Hawley.

SENIOR COLLEGE COURSES.

101, 102. Advanced Zoology. The classification, morphology and comparative anatomy of the vertebrates. Prerequisite, Zoology 1, 2 or 3, 4. Fall and Winter quarters. Five credits each quarter.

Hours to be arranged. *Assistant Professor Pack.*

111. GENETICS. The biological principles of life and the inheritance of characters. A study of the germ cells with reference to heredity. The questions of variation, mutation, the inheritance of acquired characters, pure lines, Mendelism, sex determination and genetic principles generally are the main subjects of discussion. Prerequisites, Zoology 1, 2 or 3, 4. Fall quarter. Four credits.

M. W. F. S. 11:00. *Assistant Professor Pack.*

112. EUGENICS. The principles of genetics as applied to the human race. Attention is given the historical development of and needs for eugenics, the inheritance of physical, mental and moral traits; human crosses, consanguineous marriages, eugenic procedure and other principles which influence the inate qualities of human beings. Prerequisite, Zoology 111. Winter quarter. Four credits.

M. W. F. S. 11:00. *Assistant Professor Pack.*

121, 122, 123. HISTORY AND EMBRYOLOGY. A general course of histology and embryology, with special reference to man. Fall quarter, lectures and laboratory work in the principles of technic and a study of epithelia tissue. Winter quarter completes work in histology and continues with a treatment of the germ cells, their maturation and fertilization. Spring quarter, comparative study of the embryological development of amphioxus, frog and man. Prerequisite, General Zoology. Fall, Winter and Spring quarters. Four credits each quarter.

Hours to be arranged.

Professor Hawley and Assistant Professor Pack.

GRADUATE COURSE.

201. RESEARCH. The student who wishes to engage in some line of original research and is qualified to do so may elect and

study some topic from eugenics, ecology, morphology or other zoological subjects. Open to undergraduate students only by special arrangement with the department. Thesis.

Time and credits to be arranged.

Professor Hawley and Assistant Professor Pack.

Twenty-Eighth Annual Commencement
List of Graduates 1920-21

MASTER OF SCIENCE

In Home Economics

Greaves, Ethelyn Oliver

BACHELORS OF SCIENCE

In Agriculture

Agronomy

Allan, Albert Bailey
Alston, Ray Lester
Barber, George Percy
Chinchiah, Darisi
Evans, Hilton Bird
Khan, Ameen
Knight, George C.
Owen, Forest Vern
Price, Charles
Rallison, Robert Leo
Robison, George Albert
Rogers, David White
Sutton, William Hugh

General Course

Khan, Seyed Jafar

Animal Husbandry

Arnold, Melvin Samuel
Crook, Reno Giles
Funk, LeRoy Conrad
Hansen, Ernest Richard
McKay, Morgan Powell
McMullin, Thomas Heber
Pixton, Robert LeRoy
Yao, Hsing Huang

Entomology

Morris, Richard Alexander

Horticulture

Harmon, Frank Nelson

In Agricultural Engineering and Mechanic Arts

Irrigation and Drainage

Anderson, Stanley Rodin
Barker, James Roy
Bastow, Joseph Garfield
Clyde, George Dewey
Jerman, Ira Donald
McDonald, Howard
Wayman, Wallace
Wright, Charles Coulsen Rich

Roads

Gardner, Willard Woodruff

In General Science

Chemistry

Bateman, George Monroe
Flanders, Hyrum Edward
Maughan, Angus Marion
Snow, William J.

Education

Dewey, Horace Asa

English

Condit, Sara Amanda
Egbert, Anna
Frongner, Sybil
Laub, Emma Katherine
Oberhansley, Pearl
Peterson, Elsie
Vernon, Aldyth
Vernon, Lais
Wyatt, Elizabeth

Mathematics

Aitken, Adren

Modern Languages

Engemann, Marguerite

In Commerce and Business Administration

Economics

Clawson, James Harold
Lorentzen, Eden C.
Olesen, Einar Bernhardt

Political Science

Christensen, James Morris

Sociology

Hurren, Clarence Ashcroft

In Home Economics

Foods

Becraft, Ireta Harris
Carroll, Margaret Kezia
Chipman, Merle Southwick
Esplin, Evelyn
Fuller, Dora
Jacobs, Helena
Jones, Luella Peterson
McDonald, Loa Stevenson
Merrill, Effie Ensign

Household Administration

Maughan, Elsie

Textiles and Clothing

Bailey, Adaliene Barber
Barker, Mignon
Barlow, Ona Jessie King
Bird, Louise
Heggie, Felicia Loosle
Heywood, Ida
Mendenhall, Blanche
Merrill, Oretta Dudley
Miller, Elna
Skanchy, Verna Louise

Officers Reserve Corps of the Army of the United States

Second Lieutenant, Coast Artillery Corps

Owen, Forrest Vern

Second Lieutenant, Quartermaster Corps

Hayes, J. Francis
Stevens, Justus Magnus

Twenty - Ninth Annual Commencement
List of Graduates 1921-1922

MASTERS OF SCIENCE

In Agriculture

Yao, Hsing Huang

In Home Economics

Bennion, Claire

BACHELORS OF SCIENCE

In Agriculture

Agronomy

Allred, Thatcher
Bateman, Alfred Hess
Carlson, John Wilford
Diehl, Erastus Jordan
Henrie, Irvin Lund
Heywood, David Evans
Mortensen, James Leo
Richardson, Rufus Dee
Smith, Arthur Bennion
Smith, Moroni West
Tingey, Delmar Clive
Wheeler, Jesse Kelsh
Willie, Vernal

Horticulture

Backman, George A.
Lung, Kai Lum

Animal Husbandry

Bateman, George Quayle
Cannon, Allan Munn
Clark, Heber Don Carlos
Harvey, Hugh
Kenner, Robert Lee
Loveless, Glenn LeRoi

Botany

Linford, Maurice Biood
Riter, William Emerson
Slaugh, Forest Steven

Farm Management.

Hart, Charles James

In Agricultural Engineering and Mechanic Arts

Irrigation

Backman, Albert Edwin
Clyde, Harry Schley
Hansen, Percy
Stevenson, Clifford Allen

Mechanic Arts

Stock, Sidney Richard

In Commerce and Business Administration

Accounting

Ballif, Serge Louis
Clarke, Samuel Cyril
Gardner, Vernal Delroy
Hinman, Karl G.
Nielson, Leo Halling
Smith, Driver Edwin
Thain, George Wendell

Business Administration

Falck, Louis K.

Economics

Alvord, Harold Stevens
Grimaud, Virginia
Hintze, Alvin Boyd
Merrill, Wilford Jonsson
Nebeker, Sidney J.
Worley, John Clyde

History

Bachman, Comfort Margaret

In General Science

Art

Fletcher, Eula

Chemistry

Nelson, Daniel H.

Education

Tippetts, Alfred Irvin

English

Allen, Hazel Louise
Barrett, Eva May
Odell, Florence Louise
Porter, Wilford Dowdle
Rich, Geneva
Rich, Irene
Spande, Sibyl Eleanor

Geology

Parkinson, Wallace Benson

History

Eames, Leona

Mathematics

Cannon, Douglas
Kimball, Chase Ray

In Home Economics

Foods

Bradford, Lola R.
Crookston, Edna Hilda
Daines, Carmen Parkinson
Leigh, Caroline
Lewis, Reva
Merrill, Loila Dudley
Page, Anna
Reece, Jennie Aileen

Textiles

Brown, Effie Hawkes
Daines, Luella Parkinson
Edmunds, Ruby
Law, Elizabeth James
Lindsay, Agnes
Morris, Sadie Ockey
Odell, Afton
Querry, Hattie Bell
Ruff, Enid Elizabeth
Walker, Florence
Wrathall, Penina

Officers Reserve Corps of the Army of the United States

Second Lieutenant, Coast Artillery Corps

Larsen, Floyd C. Stevenson, Clifford A. Orme, John A.

Second Lieutenant, Quartermaster Corps

Smith, Rulon

Qualification for Appointment as Second Lieutenant, Quartermaster Corps

Bowman, William W.

HONORS 1921-1922

Scholarship: The following students have been selected as deserving special distinction for high achievement in scholarship. They have, accordingly, received either Scholarship A's or Honorable Mention:

Scholarship A's

Nathala Christensen
Lawrence Crosland
John S. Logan
Emery R. Ranker
Enid Ruff
Moroni W. Smith
Alfred J. Tippetts

Honorable Mention

Peter Rich Johnston
Rose I. Thompson
W. H. Bell
W. Carlos Seegmiller
Malcolm Merrill
Glenn L. Loveless

Debating and Oratory

Inter-Collegiate Debating:

W. J. Merrill
Ira King Hendricks
Emery Ranker
W. C. Hulme
Kenneth Robinson
Driver E. Smith
Preston M. Nielsen
Bramwell Peck

The Howell Medal Awarded to:
Emery Ranker

The Hendricks Medal Won By:
Driver E. Smith

The Casto Medal Won By:
Preston M. Nielson

The Sons of the American Revolution Medal Won By:
W. J. Merrill

The Men's Shop Medals Won By:
Milton Jensen
C. H. Linford

Scholarships

The following students were awarded the Johansen Scholarships for 1922-23:

Emery Ranker
Arthur Tanner
W. H. Bell

Student Officers

Student Body Officers:	
E. J. Diehl	President
Blanche Worley	Vice-President
Geneva Ensign	Secretary
Audene Merrill	Secretary
"Student Life" Staff:	
Wilford D. Porter	Managing Editor
King Hendricks	Associate Editor
O. D. Merrill	Business Manager
R. D. Smith	Assistant Business Manager
"Buzzer" Staff:	
Reed Bailey	Editor-in-Chief
Wendell Thompson	Business Manager

Special Awards

The Citizenship Award, a medal given for distinguished College citizenship, was awarded to Charles J. Hart.

The Lois Hayball Medal, given to the best student in home economics, was awarded to Enid Ruff.

The Reserve Officers' Training Corps Medal, given to the member of the R. O. T. C. who best represents the ideals of the Corps, was awarded to Cadet Major Clifford A. Stevenson.

The William Peterson Science Medal, given to the author of the best paper on some selected scientific subject, was won by Hattie Bell Querry.

The Vernon Medal, given to the writer of the best short story written around a western setting, was won by Charles E. McClellan.

List of Students 1921-1922

In the following list "a" stands for agriculture; "aema" for agricultural engineering and mechanic arts; "ho" for home economics; "c" for commerce; "g" for general science; "ss" for summer school; "G" for Graduate; "S" for Senior; "J" for Junior; "So" for Sophomore; "F" for Freshman; "V" for Vocational; "Fed" for Federal; "sp" for Special; "un" for unclassified.

Abbott, Brooks a-Un	Delta
Abbott, Israel ss-Fed	St. George
Adams, Claude H. c-J	Tremonton
Adams, George T. c-F	Logan
Adams, Jos. Chas. c-F	Logan
Adams, Roy L. aema-V-ss-Fed	Logan
Adams, Verena c-F	Logan
Adamson, David D. a-F-ss-Fed	Pleasant Grove
Adamson, Herbert g-So	Richmond
Adkins, Oren M. aema-V-Fed	Casper, Wyoming
Affleck, Margaret ss	Logan
Albertsen, Sam aema-V	Salt Lake City
Aldous, Clarence M. ss-Fed	Ogden
Aldous, Horace a-V	Huntsville
Aldous, Lester c-V	Huntsville
Allen, Charles E. a-V-Fed	Orderville
Allen, Hazel L. g-S	Raymond, Alta., Canada
Allen, Henry A. aema-V-Fed	Kazan, Colo.
Allen, Hortense G. ho-V	Logan
Allen, J. Glenn a-V	Tuttle, Idaho
Allen, Lloyd E. a-Un	Logan
Allen, Lucille B. g-J	Raymond, Alta., Canada
Allen, Marion aema-V	Cove
Allen, Mark P. a-V-Fed	Grace, Idaho
Allen, Ross D. aema-V-Fed	Jefferson, Iowa
Alliston, Charles R. a-V-ss-Fed	Millville
Allred, Justin P. a-V-Fed	Vernon
Allred, Edgar ss	Afton, Wyoming
Allred, Leigh R. a-V-Fed	Deseret
Allred, Thatcher a-S-ss	Blackfoot, Idaho
Allred, Theras O. ss	Logan
Almond, Burton aema-V	Downey, Idaho
Alvord, Harold S. c-S	Logan

Alvord, Lewis G. c-Un	Logan
Anderson, Celia ss	Lewiston
Anderson, Clifford J. c-V-Fed-ss	Tremonton
Anderson, Edna ss	Sterling
Anderson, Florence g-F	Logan
Anderson, Frank H. c-Un	American Fork
Anderson, Jos. W. a-V-Fed	Lyman, Wyoming
Anderson, Leota ho-So	Ephraim
Anderson, Lochlin J. a-V-Fed	Ogden
Anderson, Melvin E. g-F	Logan
Anderson, Peter E. aema-V-Fed	Salt Lake City
Anderson, Rachel g-Un	Grantsville
Anderson, Silas W. a-F	Richmond
Anderson, Waldo M. c-J	Logan
Anderson, Woodruff H. a-J	Logan
Andreasen, Clara ss	Hyrum
Andrews, Lawrence C. c-V	Logan
Andrus, Annie g-f	Spanish Fork
Andrus, Leonard ss-Fed	Spanish Fork
Andrus, Lester ss-Fed	Spanish Fork
Andrus, Lucy ho-So	Spanish Fork
Arave, Vernal L. ss-aema-V-Fed	Shelley, Idaho
Arnspiger, Chester E. aema-V-Fed-ss	Telluride, Colo.
Arthur, Walter E. aema-V-Fed-ss	Oakland, Cal.
Asay, Eleanor E. g-F	Castle Dale
Atwood, Walter E. a-So-ss-Fed	Crescent
Austin, Lloyd J. aema-Un	St. Anthony, Idaho
Axline, Samuel E. aema-V-Fed	Fairfield, Iowa
Axline, William C. aema-V-ss-Fed	Lerel, Idaho
Babb, Francis M. ss-Fed	Logan, Iowa
Bachman, Blaine c-J	Eden
Bachman, Comfort M. c-S	Eden
Backman, Albert E. aema-G	Santaquin
Backman, Frank A. aema-F	Santaquin
Backman, Geo. A. a-S	Santaquin
Bagley, Almina g-So	Ogden
Bagley, Clara ss	Provo
Bagley, John C. aema-V	Granger, Wyoming
Bailey, Reed W. g-J-ss-Fed	Logan
Bair, Amos W. a-F	Richmond
Baker, Carrie R. ss	Tooele
Baker, Clarence E. ss	Tooele
Baker, Oralie V. ho-F	Ogden
Ballard, Carman ho-S-ss	Logan
Ballif, S. Louis c-S	Whitney, Iaaho
Ballif, Paul S. aema-Un	Whitney, Idaho
Ballinger, Pearson A. c-So	Ogden
Bankhead, Heber N. c-So	Logan
Bankhead, Rachel g-Un-ss	Logan

Barber, Claire g-F	Logan
Barber, Ellen ss	Logan
Barber, Margaret g-F	Logan
Barber, Solon R. ss	Logan
Barker, Aldro aema-V	Ogden
Barker, Elwood g-F	Ogden
Barker, Horace L. a-F	Ogden
Barlow, Ivan g-Un	Clearfield
Barnfield, Rufus aema-V-Fed	Harrisburg, Ill.
Barrett, C. Elmer g-G	Ogden
Barrett, Eva M. g-S-ss	Logan
Barrett, J. Milton aema-So	Logan
Barrows, Effie S. ss	Logan
Barrus, Layton aema-V	Grantsville
Barson, Peter E. c-V	Clarkston
Bartlet, Hobart a-F	Logan
Bateman, Alfred H. a-S-ss	Paris, Idaho
Bateman, C. Harold a-F	Paris, Idaho
Bateman, Geo. M. ss	Paris, Idaho
Bateman, Geo. Q. a-S	Sandy
Bates, Geo. S. c-G-ss	Logan
Batt, Chas. G. g-V	Logan
Batt, Jeanette T. G-Sp	Logan
Baugh, Phyllis g-Un	Logan
Beach, Floyd M. a-S-ss-Fed	Bloomingdale, Mich.
Becker, Blaine c-F	Ogden
Becraft, Raymond.. a-G	Logan
Bell, Frederick a-V-ss-Fed	Elsinore
Bell, Greta J. ho-J	Richfield
Bell, Wm. H. c-J	Logan
Bellliston, R. Alva a-V-ss-Fed	Nephi
Benack, Homer aema-V-Fed	Los Angeles, Cal.
Bennett, Bertha L. g-V	Logan
Bennett, Elizabeth ho-F	Salt Lake City
Bennion, Claire ho-G	Salt Lake City
Bennion, Dean ho-J	Vernal
Bennion, Elma ss	Logan
Bennion, Erma ss	Logan
Bennion, Leland c-Un ..	Vernal
Bennion, Leo a-V	Salt Lake City
Benson, Clarence L. a-V-Fed	Douglas, Wyoming
Benson, Joseph c-V	Whitney, Idaho
Benson, Margaret g-F	Whitney, Idaho
Benson, Sergene ho-F	Logan
Berg, Vera ho-F	Castledale
Bentley, Eva ss	Trenton
Bergeson, Asia H. ss	Logan
Bergstrom, Jared E. aema-V-Fed	Logan
Berntson, Milton R. c-F	Logan

Berrett, Donald T. aema-V ....
Bickmore, C. Irving c-So .... Ogden
Bickmore, Harvard c-F ....Logan
Bickmore, Wallace O. g-F .... Logan
Bigler, Horace J.c-J .... Logan
Bingham, Hazel ho-So .... Riverside
Bingham, Jas. W. a-So-ss .... Ogden
Binkley, Ralph V. a-V-ss-Fed ....Montrose, Colorado
Birch, Rex E. c-V .... Grand Junction, Colo.
Bird, Orvil a-F .... Duchesne
Birkes, Wm. H. aema-V-Fed .... Springville
Bishop, Jos. C. aema-V-Fed .... Independence, Kan.
Bjorkman, S. Robert a-J .... Kaysvile
Bjarnason, Ida H. ss .... Heber
Black, Thomas a-V-Fed-ss .... Logan
Blackburn, Jefferson E. a-V-Fed .... Coalville
Blackburn, Thurland H. a-V-Fed ....Oasis
Blackham, John B. c-F .... Loa
Blair, Bern B. a-V-Fed .... Moroni
Blanchard, Arlo a-Un .... Mound Ridge, Kan.
Blanke, Wm. V. a-V-ss-Fed .... Salt Lake City
Bluemel, Grace B. ho-V .... Grand Junction, Colo.
Blyth, Godfred W. aema-V-Fed .... Logan
Bolingbroke, Delbert T. g-F .... Oakland, Cal.
Bolton, Frank L, a-V-Fed .... Malad, Idaho
Boothe, J. Neff g-F-ss ....Paris, Idaho
Bott, Henrietta g-F-ss .... Logan
Boss, Anna ho-So-ss .... Brigham
Boswell, George L. aema-F .... Logan
Bowen, Ellen c-F .... Nephi
Bowen, Grant R. a-V-Fed .... Spanish Fork
Bowen, Helen Marr ho-F .... Salt Lake City
Bowman, Will W. g-So .... Logan
Bouner, Russell M. ss-Fed .... Ogden
Boyden, Ruby M. ss .... Weatherford, Texas
Boyle, Leo J. aema-V-Fed .... Manti
Bracken, Aaron F. a-G ....Albany, Wyoming
Bracken, Mrs. A. F. g-Un .... Nephi
Bradford, Lola R. ho-S-ss .... Nephi
Brady, John a-F .... Spanish Fork
Brassell, Clifton a-V-Fed .... Logan
Brewer, Chas H. a-V-Fed .... Braxton, Miss.
Brewer, Jos. P. a-V-Fed .... Crawford, Colo.
Brewer, Reason A. aema-So-ss-Fed ....Burlington, Colo.
Bright, Clifford M. aema-V .... Perry, Iowa
Brinkerhoff, Minnie ss .... Richmond
Brossard, Edgar B. g-G .... Teasdale
Brown, Ben L. g-V .... Logan
Brown, Clair E. aema-V .... Logan
.... Ogden

	Logan
Brown, Effie H. ho-S-ss	Spanish Fork
Brown, Ella g-V	Logan
Brown, Gladys g-F	Colorado Springs, Colo.
Brown, Harold J. aema-V-Fed	Ogden
Brown, Henry c-V	Levan
Brown, Merl W. aema-V-ss-Fed	Greenwich
Brown, N. Earl g-J	Salt Lake City
Brown, Oren M. a-V-Fed	Duchesne
Brummett, Wesley B. a-So-ss-Fed	Tooele
Bryan, Alexander J. a-J	Logan
Budge, Blanche g-J	Logan
Budge, Ivaloo ho-So	Logan
Budge, O. Wendell g-Un	Daniels, Idaho
Buehler, Ines ss	Bern, Idaho
Buehler, Parely A. a-V-Fed	Logan
Bullen, Helen, ho-F	Logan
Bullen, H. Keith aema-J	Agate, Colo.
Burge, Russell J. a-V-Fed	Santa Barbara, Cal.
Burgin, Harold O. aema-V-Fed	Delta
Bunker, Ralph C. ss-Fed	Logan
Burgoyne, David A. c-G	Logan
Burgoyne, Ivan E. a-V	Montpelier, Idaho
Burgoyne, John M. aema-So	Logan
Burgoyne, Lucile ss	Montpelier, Idaho
Burgoyne, Richard a-F	Brigham
Burnham, Eda ss	Logan
Burnham, Erma g-F	Logan
Burnham, Virginia ho-F-ss	Logan
Burnham, Janet ss	Bountiful
Burningham, Josephine ho-So	Mt. Pleasant
Burnside, James C. aema-V-ss-Fed	Mt. Pleasant
Burnside, N. M. aema-V-Fed	Logan
Busby, Thos. D. a-V-ss-Fed	Bloomington, Ind.
Butcher, Gilbert B. a-V-Fed	Monticello
Butts, Clyde A. a-F-ss-Fed	Sunnyside
Caffey, Andy, c-F	Logan
Caine, Kinnie ho-So-ss	Logan
Caldwell, Jas. O. aema-V-ss-Fed	Logan
Call, Cyril A. ss	Rigby, Idaho
Call, Ivie H. ss	Ogden
Call, Orvis A. a-V-ss-Fed	Panguitch
Cameron, Geo. A. aema-V-Fed	Salt Lake City
Cameron, Robert a-So	Logan
Campbell, A. Clem g-S	Ogden
Campbell, Curtis aema-V	Moab
Campbell, Leo a-V-ss-Fed	Salt Lake City
Cannon, Alan M. a-S	St. George
Cannon, Douglas g-S	Salt Lake City
Cannon, Elizabeth ss	

Cannon, Jasmine ss ....
Cannon, Wm. T. aema-F .... Logan
Cantwell, Vivian ss .... Ogden
Carder, Dean S. g-G .... Ogden
Cardon, Margaret ho-So .... Medford, Oregon
Cardon, Sybil ho-Un .... Logan
Carlson, John W. a-G-ss .... Logan
Carlson, Venice ho-F .... Logan
Carter, Chas. H. aema-J .... Logan
Carter, R. Lawrence c-F .... Vernal
Castleberry, Sydney R. aema-F-Fed .... Vernal
Chadwick, Leroi C. aema-V .... Trenton, Ga.
Chalfar, Brainard c-V .... Brigham
Chamberlain, Karl S. aema-J-ss-Fed .... Tremonton
Chambers, Chester A. g-So .... Provo
Chandler, Harvey a-V .... Ogden
Chappel, LaVon g-Un .... Ogden
Chappell, Sperry ss .... Lyman
Cheney, Frank B. a-V-Fed .... Lyman
Cheney, J. Otis g-V .... Alamosa, Colo.
Cherry, Louise c-So .... Laketown
Childs, Bliss G. a-F .... Mt. Pleasant
Childs, Florence ho-F .... Springville
Child, Floyd T. c-Un .... Springville
Chilton, J. O. g-V-ss-Fed .... Springville
Chipman, Irene ho-So .... Lehi
Christensen, Aileen D. ss .... American Fork
Christensen, Edna A. ss .... Salt Lake City
Christensen, Jas. M. ss .... Tremonton
Christensen, Jos. a-V-ss-Fed .... Logan
Christiansen, Jos. R. a-J .... Salt Lake City
Christensen, Melvin c-V .... Fountain Green
Chrsitensen, Nathalia c-F .... Tremonton
Christensen, Norman L. c-F .... Jerome, Idaho
Christensen, Rolf a-V-Fed .... Logan
Christensen, Scott S. g-F .... Reading, Mass.
Chugg, Mabel, ss .... Wellsville
Church, Rudolph ss .... Ogden
Clancy, Richard E. aema-So-ss-Fed .... Panguitch
Clark, Charles R. a-V-Fed .... Lamar, Colo.
Clarke, Cyril c-S .... Hotchkiss, Colo.
Clark, Edw. J. a-Un .... Logan
Clark, Heber D. ss .... Logan
Clark, Sarah E. c-V .... Nampa, Idaho
Clark, Thos. L. aema-V .... Clarkston
Clawson, Leslie T. c-F .... Ogden
Clegg, Martello g-Un .... Providence
Clegg, Rue L. a-J .... Heber
Clegg, Wm. D. a-V .... Heber
.... Logan

Clements, Chas. J. aema-F	Ogden
Clements, Eva g-So	Lewisville, Idaho
Clyde, Harry S. aema-S	Springville
Colby, Estella ss	Mendon
Cole, Ralph C. g-F	Nephi
Cole, Russell W. aema-F	Logan
Cole, Wilford C. a-So	Nephi
Coles, Elverne c-F	Tremonton
Coles, Herschel H. aema-So	Tremonton
Colette, Maybelle ho-Un	Smithfield
Collins, Louis R. g-V	Logan
Comish, Della ho-So	Franklin, Idaho
Comish, Reata ho-J-ss	Franklin, Idaho
Compton, Irene c-V	Luning, Nevada
Conner, Chas. H. a-V-Fed	Riverton
Condie, Lillie ss	Carey, Idaho
Condit, Amanda ss	Logan
Connolly, Reynolds aema-V-Fed	Elko, Nevada
Conrad, James M. a-V-Fed	Fowler, Colo.
Conroy, Maurice R. c-J	Ogden
Conway, Herman M. a-J-ss-Fed	Seymour, Ind.
Cook, Jerome a-V-Fed	Delta
Cook, Leah ho-J	Springville
Cook, Orville R. aema-V-Fed	Council Bluffs, Iowa
Cooley, LaVell g-F	Logan
Cooley, Marcus R. aema-J	Newton
Cooley, Walter W. aema-F	Ogden
Coombs, Nellie ho-V	Fielding
Coon, Wilfred a-V-ss-Fed	Magna
Corbett, D. Melvin aema-J	Smithfield
Cope, Orpha ss	Tropic
Cordingley, Myron L. aema-F	Marysville, Idaho
Cordner, Frank C. aema-V	Provo
Cornwall, Sidney a-So	Salt Lake City
Cotter, Raphl V. a-G	Lehi
Cowan, Glenn F. c-So-Fed	Payson
Cowley, C. Gloyd c-F	Salt Lake City
Cowley, Elna P. ss	Logan
Cowley, Samuel P. c-Un	Logan
Cox, Harry J. aema-V-ss-Fed	Murphy, Idaho
Cox, Harvey Lee a-V-ss-Fed	Ackmen, Colo.
Crane, Anna g-V	Logan
Cranney, Adelbert G. c-Un	Logan
Craney, Florence g-So	Oakley, Idaho
Cranney, Kimball J. c-So	Logan
Crawford, Geo. W. ss	Afton, Wyo.
Critchlow, Frances ho-Sp.	Hyrum
Crockett, Clyde c-F	Preston, Idaho
Croft, Gordon Y. g-J	Ogden

Croft, John a-So	Ogden
Cromer, Lyman L. ss	Salt Lake City
Crook, Albert a-F	Heber
Crook, Ernest R. a-Un	Smoot, Wyoming
Crook, Lawrence M. aema-So-ss-Fed	Payson
Crook, Wm. C. ss	Logan
Crookston, Edna ho-S	Logan
Crosland, Lawrence aema-V-ss-Fed	Holden
Crosser, Clyde C. a-V-Fed	Thermopolis, Wyo.
Crowther, Edna g-So-ss	Logan
Crowther, Marilla ss	Logan
Culpepper, Clemmie O. a-V-Fed	Lake, Miss.
Culpepper, Cora ho-V	Union, Miss.
Dahle, Gilbert g-V	Logan
Dahle, Norman G. aema-V-Fed	Logan
Daines, Amy ss	Hyde Park
Daines, Carman ho-S-ss	Logan
Daines, Hazen ss	Hyde Park
Daines, Luella ho-S-ss	Logan
Daines, Lydia J. ss	Hyde Park
Daley, David E. c-J-ss-Fed	Provo
Dalton, Blanche c-Un	Parowan
Dalton, Hiram E. aema-So-ss-Fed	Visalia, Cal.
Dancy, Charlotte E. g-Sp	Logan
Daniels, Fred a-V-Fed	Middle Inlet, Wis.
Daley, Leland aema-V-Fed	Salt Lake City
Datwyler, Jos. aema-V-ss-Fed	Logan
Davenport, Ralph aema-V-ss-Fed	Butte, Mont.
Davidson, Mervyn aema-V-ss-Fed	Logan
Davis, Edgar a-V-Fed	Paintsville, Ky.
Davis, Orson J. a-V-Fed	Salt Lake City
Davis, Parley O. a-F	Salt Lake City
Davis, Rex c-F	Salem
Davis, Roland aema-F	Logan
Davis, William S. aema-V-Fed	Salt Lake City
Dawson, William C. ss-Fed	Judsonia, Ark.
Day, Elmer B. aema-V-Fed	Collins, Ohio
Day, Harmon, a-F	Draper
Day, Willard E, aema-V-ss-Fed	Fillmore
Deiderich, J. J. c-V-Fed-ss	Spokane, Washington
Delano, Arlie A. aema-V-ss-Fed	Strawberry Point, Iowa
DePuy, Dorothy g-Un	Logan
Deschamps, Louis c-F	Malad, Idaho
Deschamps, Mary ho-F	Malad, Idaho
Despain, Robert E. a-F-ss-Fed	Lovell, Wyoming
Diehl, Erastus J. a-S-ss-Fed	Filer, Idaho
Dillon, Thomas a-V-Fed	Hazelton, Ind.
Domgaard, Hyrum J. a-V-Fed	Gusher
Doolas, George Z, a-V-ss-Fed	Salt Lake City

Dorius, Orpha ss	Ephraim
Douglas, Ernest C. ss-Fed	Zillah, Washington
Douglas, Merlbourne c-F	Ogden
Drake, Virgil W. a-V-Fed	Alamosa Colo.
Draney, Joseph E. aema-V-ss-Fed	Ogden
Dudley, A DeMarr ss	Jensen
Dumke, Hobart R. a-V-ss-Fed	Farmington
Dunbar, Wallace E. aema-V-ss-Fed	Logan
Durfee, Edmond F. aema-V-ss-Fed	Vernal
Durham, Marian g-F	Logan
Durham, Morton R. g-F	Logan
Dutson, Richard G. a-V-Fed	Rigby, Idaho
Eager, James H. a-So-ss-Fed	Nephi
Eager, Mattie C. ho-So-ss	Nephi
Eames, Ilah ho-Un	Logan
Eames, Leona g-S	Logan
Earl, Frank J. c-F	Logan
Eaton, Willard K. a-V-Fed	Stoneham, Colo.
Edlefsen, Carrie B. g-V	Logan
Edmond, Alfred S. a-V-Fed	Denver, Colo.
Edwards, Albert W. a-V-Fed	Charleston
Edwards, Mae g-J-ss	Logan
Egbert, S. Roy aema-Un-ss	Logan
Eggen, Silas T. a-So-ss-Fed	Salt Lake City
Egbert, Anna g-G	Lewiston
Eldridge, Edward W. c-V	Cardston, Alta. Canada
Eliason, Drue g-F-ss	Logan
Ellerman, Adele ss	Logan
Elllis, Reuben A. c-J	Pleasant Grove
Ellsworth, Von T. a-So-ss-Fed	Logan
Elsmore, Aldia ho-So	Silver City
Engebretson, Alfred a-V-ss-Fed	Grand Junction, Colo.
Ensign, Allen a-V	Ogden
Ensign, Geneva g-J	Logan
Erickson, Elgin W. c-So-Fed	Sandy
Erickson, Justin E. c-F	Richmond
Erickson, Mabel ho-V	Logan
Erickson, Viola g-V	Logan
Etter, John aema-So-Fed	Albuquerque, New Mexico
Evans, Ariel a-V	Huntsville
Evans, David M. a-V-Fed	Huntsville
Evans, David ss	Malad
Evans, Geo. C. aema-V-Fed	Bennett
Evans, James W. J. a-J	Malad, Idaho
Evans, Leone ho-J	Salt Lake City
Falck, James g-F	Ogden
Falck, Louis K. c-S-ss	Ogden
Faatz, Sarah ss	Mayfield
Falslev, Marinus J. aema-V-Fed	Benson

Faris, Elizabeth G. ss	
Farley, Albert S. a-V-Fed	Ogden
Farr, Milan A. g-. .F	Durango, Colo.
Fawson, Lyman a-So	Logan
Fenley, Pinkney R. a-V-ss-Fed	Grantsville
Fenton, J. Stanley a-S-ss	El Paso, Texas
Fenton, Lee a-F	Provo
Ferguson, Hollis D. a-F-ss-Fed	Tooele
Farley, Albert S. a-V-Fed	Logan
Fife, Arthur aema-G	Durango, Colo.
Fife, Ila ho-Un	Logan
Fife, Milton J. g-So	Logan
Fifield, Jesse H. a-V-ss-Fed	Logan
Fillerup, Erastus K. aema-V	Weston, Idaho
Finlayson, F. Emerson g-F	Idaho Falls, Idaho
Fish, Lynwood L. ss	Logan
Fish, Murland W. g-J	Logan
Fitzgerald I. Ensign a-F	Logan
Flanders, Hyrum E. g-G	Kamas
Fletcher, Eula g-S	Logan
Fletcher, Samuel H. G-F	Provo
Fogelberg, Nephtune ss	Preston, Idaho
Fogg, Lucille g-F	Logan
Folsom, Paul W. a-Un	St. Anthony, Idaho
Ford, John W. c-F-Fed	Salt Lake City
Fornoff, Harold L. c-F	Peru, Ill.
Fornoff, Homer S. aema-J	Ogden
Forsgren, Hazel ho-J	Ogden
Forsgren, J. Clifford c-So	Brigham
Fowles, Jos. D. aema-F-ss-Fed	Logan
Frazier, Fay M. aema-V-Fed-ss	Burley, Idaho
Frazier, E. Lucian a-V-Fed	Oakley
Frederick, Elfriede g-J	Buhl, Idaho
Frederickson, Geo. W. aema-V	Logan
Freeman, Ernest a-V-Fed	Weston, Idaho
Freestone, Geo. A. aema-V-ss-Fed	Gadsden, Alabama
Frew, Eugene a-G	Oakley, Idaho
Frizell, Ruby S. a-V-Fed	Hooper
Frizell, Pearl ho-V	Griffith, Colo.
Froerer, David L. aema-F-Fed	Holden, Mo.
Froerer, Wilford F. aemaV	Ogden
Frost, Chas. G. aema-V-ss-Fed	Ogden
Frost, Jas. A. g-Un	Spanish Fork
Fry, Verle g-F	Ephraim
Fuller, Chloe ss	Logan
Funk, Carmen ss	Eden
Funk, Claudia g-So	Richmond
Funk, Cyril R. aema-F	Richmond
Francis, Neil G. aema-V-Fed	Richmond
	Spanish Fork

Gale, Rowena ss	Beaver
Gardner, Bertrand R. a-F	Sandy
Gardner, David aema-F	Sandy
Gardner, Elias g-F	Salem
Gardner, V. DelRoy c-S	Murray
Gardner, Ray D. a-V-ss-Fed	Rexburg, Idaho
Garrett, J. Lawrence c-F	Nephi
Garrison, Russell L. aema-V-Fed	Denver, Colo.
Garton, Percy F. a-F-ss-Fed	Delta, Colo.
Gayler, Benj. A. aema-V-Fed	Avon, Colo.
Geddes, Elmer S. c-V-ss-Fed	Logan
Geddes, Martha ho-So	Worland, Wyoming
George, Harvey c-V-ss-Fed	Salt Lake City
Gibbs, Reuben c-Un	Brigham
Giles, Orah g-Un	Heber
Giles, Vincent a-F	Heber
Gillespie, Frank A. aema-V-Fed	Murray
Glauser, Alfred aema-V	Logan
Glesing, Harry C. aema-V-ss-Fed	Logan
Goodsell, Dean C. c-V	Logan
Goodsell, Violet ho-F	Logan
Goodwin, Cadet aema-V-ss-Fed	Decatur, Ill.
Goss, Dorothy, ss	Logan
Green, Chloe c-V	Logan
Green, Max T. a-F	Murray
Green, Raymond W. a-J-ss-Fed	Wellsville
Greenhalgh, Alma c-V	Logan
Gregory, Fred E. a-F-ss-Fed	Delores, Colo.
Griffin, Walter T. ss-Fed-aema-V	Ogden
Griffiths, Thos. aema-V	Smithfield
Grimaud, Virginia c-S-ss	Logan
Groebli, Otto aema-V	Logan
Gubler, Albert aema-V	Lund, Nevada
Gubler, Helen A. g-G	Santa Clara
Gubler, Louis J. c-V	Santa Clara
Gull, LeRoy c-F	Brigham
Gull, Mabel ho-V	Brigham
Gunn, Frank E. aema-V	Hoytsville
Guerin, Thos. M. aema-V-Fed	Rawlins, Wyo.
Gurell, Norbert A. aema-F-ss-Fed	Randolph
Gustavson, Ernest L. a-V-Fed	Vernon
Hadfield, Edward a-So	Salt Lake City
Hadley, Lawrence aema-V	Ogden
Haldeman, Ward F. a-So-ss	Pine Grove, Pa.
Hales, Heber L. a-So	Salt Lake City
Hall, Eugene aema-V	Ogden
Halstead, Geo. W. aema-V	Duchesne
Halversen, Roy c-F	Paradise
Hammond O. Cyril c-F	Logan

Hansen, Nellie P. g-Sp	Logan
Hansen, Carol ho-J	Bountiful
Hansen, August J. aema-G	Logan
Hansen, DeVeda ho-So	Ephraim
Hansen, Dora ho-So	Richfield
Hansen, Dwight E. aema-Un	Collinston
Hansen, Evelyn g-V	Providence
Hansen, Merrill aema-V	Logan
Hansen, Norma g-F	Logan
Hansen, N. Severin c-J-ss	Logan
Hansen, Percy aema-S	Logan
Hansen, Willard M. c-J	Salt Lake City
Harding, Josiah F. aema-V-Fed	Magna
Harding, Ralph W. g-F	Malad, Idaho
Hardy, Leon D. c-G	Logan
Harmon, Alice ho-F	St. George
Harmon, Frank N. a-G	St. George
Harmon, Lillie E. ho-F	St. George
Harris, Alfredo a-V-ss-Fed	Pagosa Springs, Colo.
Harris, Beatrice D. g-Sp-ss	Logan
Harris, Karl, aema-J	Logan
Harris, Morgan g-So	Logan
Harrison, James A. aema-V-ss-Fed	Lapoint
Harrison, John S. ss	Thatcher, Idaho
Harrison, Lee B. g-So	Logan
Harrison, Marrion A. aema-V	Randlett
Hart, Chas. J. a-S	Salt Lake City
Hartley, Wayne aema-V	Indianola
Hatch, Geneive ho-J	Woods Cross
Hatch, Katherine ho-So	Logan
Hatch, Lafayette T. c-J	Logan
Hatch, Leah ss	Franklin, Idaho
Hatch, Mary ss	Woods Vross
Hatch, Waldo M. c-F	Logan
Hathaway, Jesse P. a-V-Fed	Monte Vista, Colo.
Hawley, Fon R. a-F	Oasis
Hawley, Luell c-F	Richfield
Hawley, Utella g-V	Oasis
Hawley, Rollo E. aema-V	Logan
Hawes, Mabel g-V	Logan
Haycock, Obed C. g-F	Burley, Idaho
Hayes, Harry M. a-V-Fed	Grand Junction, Colo.
Heaton, Jess W. a-V-Fed	Twin Falls, Idaho
Heinrich, Esther ss	Smithfield
Hemmert, Wilford N. a-V	Thayne, Wyoming
Hemphill, Ernest C a-V-Fed	Broughton, Kan.
Henderson, Jesse H. a-V-Fed	Clifton, Idaho
Hendricks, Abbie ss	Richmond
Hendricks, C. Durrell c-F	Logan

	Richmond
Hendricks, Gertrude g-F-ss	Richmond
Hendricks, I. King g-J	Wellsville
Hendry, Marie ss	Manti
Henrie, Irven L. a-S	Salt Lake City
Hermansen, Johanna ss	Milwaukee, Wis.
Hessenthaler, Herbert C. a-V-Fed	Mesa, Arizona
Heywood, David E. a-S-ss	Mesa, Arizona
Heywood, Yates ss	Logan
Hickman, Leon M. g-Un	Logan
Hickman, Myrthus c-F	Logan
Hickman, Radino L. c-So	Logan
Hickman, Winnie W. ho-Sp	Kanab
Hicks, Mark L. a-V-ss-Fed	Locke, Ark.
Hill, Geo. D. aema-V-ss-Fed	Farmington
Hinman, Karl G. ss	Holliday
Hintze, Alvin B. c-S	Holliday
Hintze, Mabel ho-V	Logan
Hirst, Lester L. g-F	Winona, Minn.
Hitzker, Albert J. aema-So-ss-Fed	Glenwood Springs, Colo.
Hofacre, John P. a-V-Fed	Logan
Hogensen, Doloris ss	Logan
Hogenson, Lydia B. ss	Los Angeles, Cal.
Holibaugh, C. Lloyd a-V-ss-Fed	Preston, Idaho
Hollingsworth, A. Earl g-F	Hyrum
Holm, Stanley A. c-J	Marble Falls, Texas
Holman, Chas. W. a-V-Fed	Gladstone, New Mexico
Holman, Hall a-V-Fed	Brigham
Holmgren, Leroy a-V	Bear River City
Holmgreen, Veoma ss	Spanish Fork
Holt, Leo J. g-F	Bennington, Vt.
Holton, LeRoy B. c-V-ss-Fed	Logan
Homer, Leo K. aema-S-ss-Fed	Logan
Homer, Chas. Murray a-F	Malad, Idaho
Hone, Geo. T. c-V	Benjamin
Hone, Gerald C. c-V	Malad, Idaho
Hone, Leila ho-F	Brigham
Horsley, Ruth g-So	Montrose, Colo.
Hosner, James J. a-V-Fed	Centerville, Pa.
Hotchkiss, Emery A. a-V-Fed	Panguitch
Houston, William W. a-V-Fed	Brigham
Howard, Frank C. aema-V	Huntington
Howard, Maud g-F	Brigham
Howard, Aree W. aema-V	Malad, Idaho
Howard, Owen c-F	Ogden
Huband, Mabel c-F	Logan
Hubbard, Wesley W. aema-V	Smithfield
Hudson, Myron aema-V-ss-Fed	Logan
Hughes, Isabella ss	Hooper
Hull, Harvey D. ss	

Hull, Robert R. a-F	
Hullinger, Harold E. ss	Hooper
Hulme, Rita g-F	Vernal
Hulme, W. Craig c-F	Logan
Hulme, William c-F	Logan
Hunter, Lewis F. a-V-ss-Fed	Logan
Hunter, W. Spencer a-So	Ogden
Hussey, Norma ho-So	Lewisville, Idaho
Hutchison, Evelyn ho-Un	Ogden
Hutchinson, Jesse ss	Wellsville
Hyde, Oneita ss	Rockland, Idaho
Hyde, O. Wendell aema-F	Hyde Park
Illum, Edgar S. a-V-ss-Fed	Logan
Ipson, Ivan g-V	Malad, Idaho
Isenhart, Leo E. aema-V-Fed	Huntington
Israelson, Vernon L. aema-V	Kemmerer, Wyo.
Ivie, Jacob W. ss	Hyrum
Ivins, Bliss ho-So	Loa
Ivins, Harold R, aema-F	Lund, Nevada
Ivins, Loraine R. a-So	Lund, Nevada
Jackson, Miriam ho-J-ss	Lund, Nevada
James, Claire c-F	Logan
James, David W. c-F	Paradise
James, Jennie ss	Malad, Idaho
James, Mae ss	Paradise
Jarvis, Lester A. a-S	Paradise
Jeffs, Ormond aema-F	Salt Lake City
Jehanian, Fred a-F	Logan
Jenkins, Leonard aema-V	Shiraz, Persia
Jenkins, Myra ss	Ogden
Jenkins, Paul g-G	Freedom, Wyo.
Jenness, Geo. W. a-V-Fed	Logan
Jensen, Alvin J. a-V-ss-Fed	Manchester, N. H.
Jensen, Anita ho-Un	Provo
Jensen, Clifford a-V-Fed	Bear River City
Jensen, Elda ss	Brigham
Jensen, Evelyn g-Un	Hyrum
Jensen, Hazel M. g-J	Logan
Jensen, Hyrum S. aema-V-ss-Fed	Bear River City
Jensen, Janice c-F	Ogden
Jensen, Melvina J. ho-F	Richfield
Jensen, Milton B. a-J	Salt Lake City
Jensen, Vernal g-V-Fed	Mendon
Jessop, Beatrice ss	Providence
Jessop, Donald ss	Millville
Johnson, Clover g-F	Millville
Johnson, Delbert c-V-ss	Logan
Johnson, Estella ss	Morgan
Johnson, Floyd ss	Avon
	Logan

Johnson, Norma ho-V	Huntington
Johnson, Phyllis c-V	Logan
Johnson, Rollo V. ss	Logan
Johnston, Afton g-So	Hooper
Johnston, Peter R. a-J	Blackfoot, Idaho
Jones, Aaron B. aema-F-ss-Fed	Salt Lake City
Jones, Franklin L. aema-V-ss-Fed	Sandy
Jones, Harley L. aema-V-Fed	Powell, Wyo.
Jones, Lawrence W. a-So	Monroe
Jones, Lorin W. c-V	Spanish Fork
Jones, Mary C. g-So	Salt Lake City
Jones, Paul L. a-V-ss-Fed	Laramie, Wyo.
Jones, Phyllis J. ss	Logan
Jones, Zelpha ho-F	Tooele
Jorgensen, Edna ss	Logan
Jorgensen, Ernest aema-V-Fed	Manti
Jorgensen, Geo. E. ss-Fed	Salt Lake City
Jory, Ted a-V-ss-Fed	Sapeniro, Colo.
Karren, Lawrence L. a-V-Fed	Salt Lake City
Kearl, Burton g-V	Smithfield
Kearl, Lenora g-V	Smithfield
Kearl, Ottalee ss	Laketown
Kearl, Zella M. c-V	Smithfield
Keller, Allen D. g-So	Logan
Keller, Mabel c-F	Ogden
Kelley, John H. aema-V-Fed	Price
Kelly, Frederick H. a-V-ss-Fed	Leamington
Kelley, Russell ss-Fed	Canton, Kan.
Kelley, Vea R. a-V-Fed	Logan
Kelsey, Blaine aema-J	Springville
Kennard, Frank g-F	Logan
Kemp, Ella ss	Lewiston
Kendall, Ethel R. ss	Logan
Kendall, Wm. W. ss-Fed	Salt Lake City
Kenner, Robt. L. ss	Manti
Kent, Mary ss	Lewiston
Keopple, Phililp A. aema-V-ss-Fed	National Home, Kan.
Kerr, LauRene ss	Tremonton
Khan, Abbas aema-Un	Teheran, Persia
Khan, Bagher aema-Un	Shiraz, Persia
Kimball, Chester C. aema-V-ss-Fed	Duchesne
Kimball, C. Ray g-S	Driggs, Idaho
Kimmick, Peter a-V-Fed	Canon City, Colo.
Kindred, Chas. a-V-Fed	Aledo, Ill.
King, Allie ho-F	Kamas
King, Geo. E a-G	Logan
King, Ralph T. g-F-Fed	Sterling, Colo.
Kingsford, Diantha a-F	Grace, Idaho
Knight, Roma ho-V	Plain City

Knowles, Willard B. g-F	Logan
Knowles, Wm. T. c-F	Logan
Knowlton, Geo. F. a-So-ss	Salt Lake City
Knudsen, Hyrum C. a-V-ss-Fed	Logan
Kotter, Horace c-So	Logan
Kunz, Seymour S. g-V-ss-Fed	Logan
LeBeau, Arthur aema-V-ss-Fed	Logan
Laney, Genesta ho-F	Kamas
Langton, Lucie G. g-J	Shelley, Idaho
Langton, Gibbs c-F	Logan
Larsen, Ada ss	Logan
Larsen, Angela ss	Logan
Larsen, Andres F. a-V-Fed	Rockport
Larsen, Dean a-V-Fed	Oakley, Idaho
Larsen, Dennie W. a-V-Fed	Oakley, Idaho
Larsen, Eva c-F-ss	Hyrum
Larsen, Floyd C. aema-J	Logan
Larsen, Guy I. aema-V-ss-Fed	Logan
Larsen, James aema-V-Fed	Bingham Canyon
Larsen, John g-Un	Garland
Larsen, Lars H. g-F	Logan
Larsen, Lucile g-F-ss	Logan
Larsen, Mathilda M. ho-Un	Logan
Larsen, Melva g-F-ss	Logan
Larsen, Myrtle ss	Smithfield
Larsen, Orpha ss	Mendon
Larsen, Orville g-F	Moroni
Larsen, Parley R. c-So-ss-Fed	Logan
Larsen, Platt c-So	Preston, Idaho
Larsen, Roldo a-V-ss-Fed	Axtell
Larsen, Vernon, aema-Un	Newton
Larsen, Vernon aema-V	Logan
Law, Albert c-So	Logan
Law, Elizabeth J. ho-S	Logan
Layton, Leonard c-F	Layton
Leavill LaSell c-F	Lewiston
Ledingham, Clarence B. c-F	Bountiful
Lee, Clyde B. c-F	Kimberly, Idaho
Lee, Eva ss	Hyde Park
Lee, Olivia g-So	Brigham
Leigh, Carrie ss	Cedar City
Lemmon, Florence ho-So	Huntington
Lemmon, Henry J. a-V	Weston, Idaho
Lemon, Melvin g-F	Hyrum
Lettermaier, Henry G. a-V-Fed	Southwick, Idaho
Lewis, Clawson c-F	Lewiston
Lewis, Daniel J. a-V-Fed	Salt Lake City
Lewis, Doyl M. g-F	Marion
Lewis, Reva ho-S	Payson

	Logan
Lindblad, Victor L. g-J-ss	Salt Lake City
Lindquist, Eva ss	Logan
Lindquist, Josephine ho-F	Heber
Lindsay, Agnes ss	Ogden
Lindsay, Claude c-F	Logan
Lindsay, William c-G	Garland
Linford, Arletta g-F	Garland
Linford, Chas. H. c-J	Garland
Linford, Elmon J. g-F	Logan
Linford, Leon B. g-J	Logan
Linford, Maurice B. a-S	Logan
Lloyd, Anna ss	Minneapolis, Minn.
Loberg, Bjarne I. ss-Fed	Sharptown, Md.
Logan, John S. aema-So-ss-Fed	Woodruff
Longhurst, Geo. L. a-F-Fed	Provo
Loose, Clarence C. c-So	Ovid, Idaho
Lougee, John a-V-ss-Fed	Springville
Love, Wilber J. aema-V-ss-Fed	Logan
Loveland, Chester a-V-Fed	Logan
Loveland, Cloyd T. g-V	Payson
Loveless, Glenn L. a-S	Brigham
Luke, Harold c-So	Logan
Lund, Nettie B. ho-F-ss	Weston, Idaho
Lundquist, Irene ss	Canton, China
Lung, Kai Lum a-S	Vernal
Lybbert, Jacob N. ss	Manti
Lyon, Frank M. aema-V-ss-Fed	Logan
McAllister, Harriet ss	Logan
McAllister, Irvine L. aema-G	Panguitch
McAllister, Martin L. aema-V-ss-Fed	Pima, Arizona
McBride, Bessie B. ss	Smithfield
McCann, Jos. g-Un	Agency, Iowa
McCarroll, Boyd D. aema-V-ss-Fed	Logan
McCarrey, May ss	Logan
McCellan, Chas. E. g-G.ss	Logan
McCulloch, Lawrence L. c-F-ss-Fed	Rigby, Idaho
McCullough, Hermon W. a-V-Fed	Logan
McDonald, Howard aema-G-ss-Fed	St. George
McFarlane, Donald C. aema-J	Riverton
McFarlane, Eldon c-F	Salt Lake City
McKay, Ina ho-So	Springville
McKenzie, Leland a-V	Evanston, Wyo.
McKinnon, Arla B, ho-F	Evanston, Wyo.
McKinnon, Freeman F. g-So	James, Texas
McKissack, Gordon aema-V-Fed	Ogden
McKusker, Richard a-V-Fed	Afton, Wyo.
McLane, LeRoy a-V-Fed	Rush, Colo.
McLeod, Delgarno aema-V-ss-Fed	Denver, Colo.
McMenemy, Thos. J. a-V-Fed	

McMurdie, Louisa c-V	Logan
McNeil, Inez ho-So	Logan
McQuarrie, Rulon J. c-V	Logan
Maceman, Leslie L. aema-V-Fed	Winona, Minn.
Maceman, Martha ho-V-Fed	Salt Lake City
Mack, Douglass M, aema-V	Smithfield
Madsen, Augusta g-F	Brigham
Madsen, LaRue ho-So	Logan
Magleby, Fern ss	Monroe
Magleby, John B. a-So	Monroe
Magleby, Rosetta L. ho-Un	Monroe
Malmberg, Florence ss-g-So	Logan
Mann, Kim c-Un	Tremonton
Manning, LeRoy W. aema-V-ss-Fed	Garland
Manson, Donald L. aema-V	Eureka
Marsh, Strawn aema-F-ss-Fed	Denver, Colo.
Martell, Wm. A. aema-V-Fed	Spanish Fork
Martin, Phillip C, aema-V-Fed	Los Angeles, Cal.
Martineau, Aileen ss	Logan
Mathews, Cowan g-V	Providence
Maughan, Angus M. g-G-ss	Logan
Maughan, Bessie P. ss	Logan
Maughan, Elsie E. ss	Logan
Maughan, H. Carlisle ss	Logan
Maughan, J. Howard ss	Beaver
Maughan, Jos. S. a-So	Wellsville
Maughan, Leland aema-V	Wellsville
Maughan, Margith ss	Logan
Maughan, Marjorie ho-Un	Logan
Maxfield, Amos V c-F	Hinckley
Maxfield, Henry g-F	Logan
Maxfield, Layton a-F	Hinckley
May, Lucilla ho-F	Brigham
May, R. Golden g-F	Brigham
Maycock, Miriam ss	Logan
Mellor, Elgin aema-V	Fayette
Menard, Arthur S. aema-V-ss-Fed	Adams, Mass.
Merrick, Malcolm D, c-V-ss-Fed	Lava Hot Springs, Idaho
Merrill, Amy L. ho-G-ss	Logan
Merrill, Asa J. g-Un	Logan
Merrill, Anna H. ss	Salt Lake City
Merrill, Audene ho-J	Richmond
Merrill, Casper W. a-Un	Richmond
Merrill, Edgar C. aema-V	Logan
Merrill, Harrison R. ss	Preston, Idaho
Merrill, Hattie ss	Logan
Merrill, LaVille H. g-So	Richmond
Merrill, Loila D. ho-S-ss	Logan
Merrill, Malcolm H. g-F	Richmond

	Logan
errill, Millie L. ho-Un	Richmond
errill, O. David g-J	Richmond
errill, Ray S. c-So	Logan
errill, Wilford J. c-S	Logan
eyrick, Joseph c-F	Kanawha, Iowa
ickelsen, Frank S. a-V-Fed	Gunnison, Colo.
iller, Henry W. aema-V-Fed	St. Louis, Mo.
iller, James G. a-V-Fed	Colorado Springs, Colo.
inor, Clarence C. a-V-Fed	Pagosa Springs, Colo.
Minium, Jess E. aema-V-Fed	Parowan
Mitchell, Kathleen c-V	Parowan
Mitchell, J. Harold a-J	Logan
Moench, Louis F. g-Un	Richmond
Monson, Cyril c-So	Smithfield
Monson, Harley c-Un	Ogden
Montgomery, Myrtle g-F	Rock River, Wyoming
Montgomery, Paul W. a-V-Fed	Vernal
Moosman, David a-Un	Logan
Morgan, David D. aema-V	Logan
Morgan, Orrin P. a-V-Fed	Hiroshima, Japan
Morimoto, George a-V	Logan
Morrell, Della ss	Hyde Park
Morrell, Hattie ss	Hyde Park
Morrell, Marriner g-F	Logan
Morris, Arthur J. a-J	Salt Lake City
Morris, James C. a-V-Fed	Sugar Station
Morris, Laval S. a-J	Nephi
Morris, Sadie O. ho-S	Logan
Mortensen, Bearl N. ss	Tremonton
Mortenson, Enos a-V	Logan
Mortensen, Hyrum K. a-F	Logan
Mortensen, James L. a-S-ss	Logan
Mortensen, Martha ho-Un	Logan
Mortenson, Martin Jr. ss	Hyrum
Mortensen, Peter a-V	Logan
Mosher, Henry R. aema-V-ss-Fed	Lingle, Wyoming
Motsick, Charles aema-V-Fed	Logan
Mouritsen, Elias aema-V	Wayan, Idaho
Muir, Lee F. aema-V	Providence
Naylor, John J. aema-V-ss-Fed	Laketown
Nebeker, Sidney J. g-S	Brigham
Nebeker, Wendell P. a-V-Fed	Logan
Neeley, Nathan Glen g-F	Sugar City, Idaho
Neibaur, Thomas C. a-V	Logan
Nelson, Carl aema-F	Logan
Nelson, Celia g-V	Logan
Nelson, Daniel H. g-S-ss	Price
Nelson, Earl a-V-ss-Fed	Smithfield
Nelson, Elnora M. ss	

Nelson, George aema-V	Providence
Nelson, George T. aema-V-ss-Fed	Enterprise
Nelson, Hazel ho-S-ss	Logan
Nelson, Lela ho-V	Logan
Nelson, Lora A. ss	Salt Lake City
Nelson, Mamie g-V	Logan
Nelson, Myra ss	Logan
Nelson, Naomi ho-J	Morgan
Nelson, P. LeRoi a-So	Richmond
Nelson, Peter C. a-V-ss-Fed	Enterprise
Nelson, Clara V. ho-V	Logan
Nelson, Peter C. a-Vss-Fed	Enterprise
Nelson, Rebecca g-V	Logan
Nelson, Rulon c-F	Spanish Fork
Nevins, Edna ss	Kansas City, Mo.
Newey, Aaron aema-G	Logan
Newman, Clarence a-V-ss-Fed	Lander
Newton, Fred M. aema-V-Fed	Arvada, Colo.
Nibley, Charles W. III c-J	Logan
Nibley, Nathan ss	Logan
Nicholes, David Jr. aema-V-ss-Fed	Coyoto
Nicholes, Mark a-So	Brigham
Nicholls, William L. a-So	Salt Lake City
Nickell, Robert S. a-V-Fed	Butler, Mo.
Nielsen, Edith ho-So	Hyrum
Nielsen, Ether L. aema-Un	Hyrum
Nielson, Leo N c-S	Union, Oregon
Nielson, M. Beatrice ss	Pocatello, Idaho
Nielson, Myrtle g-V	Logan
Nielson, Oscar W. a-V-ss-Fed	Millville
Nielson, Preston M. c-Un	Logan
Nielson, Russell B. c-F	Cornish
Noble, Flora ss	Logan
Noble, Wilard a-F	Smithfield
North, Foster g-V	Smithfield
Norton, E. Virgil a-So	Salt Lake City
Nuffer, Louis F. a-G	Logan
O'Brien, Timothy aema-V-ss-Fed	Arnprior, Ontario, Canada
O'Neill, Patrick J. aema-V-ss-Fed	Denver, Colo
Obray, Ernest S. c-F-ss	Paradise
Odell, Afton ho-S-ss	Logan
Odell, Florence L. g-S-ss	Logan
Ogden, Nealy a-Un	Delta
Olson, A. Leo g-V	Smithfield
Olsen, Austin a-V-Fed	Rochester
Olesen, Esther A. c-V	Logan
Olsen, Esther ss	Acequia, Idaho
Olson, Frank aema-V	Cornish
Olson, Granville a-So	Logan

	Logan
)lson, Helmer A. aema	Hyrum
)lsen, Hilda ss	Logan
)lsen, Henry C. aema-So	Peterson
)lsen, H. Hugo aema-V	Preston
Olsen, Jos. W. ss	Hyrum
Olsen, Lillian ss	Logan
Olson, Lillie g-V	Logan
Olsen, Lucille g-F	Smithfield
Olsen, Lydia ss	Moroni
Olsen, Willliam K. g-F	Nephi
Orme, John A. g-J	Tooele
Orme, Sarah ho-F	Logan
Ormsby, Rae L. ho-sp	Salt Lake City
Osmond, Charles A. ss	Logan
Osmond, Fern ss	Logan
Osmond, Iona g-F	Logan
Osmond, L. Waldo g-F	Logan
Osmond, Wendell ss	Tooele
Ostler, Clara ho-F	Manti
Ottosen, Clifton N. ss	Sanford, Colo.
Ottesen, Vern C. a-V-ss-Fed	Malad, Idaho
Owen, Howard c-Un	Logan
Owens, William W. c-G	Logan
Pack, Herbert J. a-G	Stone, Idaho
Pack, William C. a-V-ss	Preston, Idaho
Packer, Oren M. aema-V-Fed	Ogden
Paetsch, Albert a-Un	Payson
Page, Anna ho-S	Brigham
Page, Thomas D. a-V-Fed	Vernal
Palmer, Edwin J. a-V-ss-Fed	Somerset, Colo.
Palmer, John W. aema-V-Fed	North Salt Lake
Parenzin, Peter A. a-V-Fed	Kamas
Parke, Ralph a-J-ss-Fed	Welsville
Parker, Stella ss	Logan
Parkinson, Wallace B g-S	Logan
Parry, Wilford E. a-V-Fed	Richfield
Parry, Winifred ho-F	Salt Lake City
Partridge, Clara ho-So	Hooper
Patterson, Earl A. aema-V-Fed	Holbrook, Neb.
Patterson, James O. aema-V-Fed	Shields, N. Dak.
Pavitt, Perry a-V-Fed	Manti
Peacock, Mildred ss	Sugar City, Idaho
Peck, Bramwell L. c-J	Logan
Peck, Effie ho-V	Sugar City, Idaho
Peck, Raymond c-V	Logan
Pedersen, Lyman C. c-J	St. George
Pendleton, Millie c-Un	Wellsville
Perkins, Walter G. g-So	Vernal
Perry, Myron D. aema-V-ss-Fed	

Peterson, Allie c-F	Newton
Peterson, Eliza ss	Logan
Peterson, Fred B. a-V-ss-Fed	Hatcreek, Wyoming
Peterson, Irene g-V	Logan
Peterson, Lester E. c-V-ss-Fed	Logan
Peterson, Lloyd ss	Logan
Peterson, Maurine M. g-G	Logan
Peterson, Mell g-V	Logan
Peterson, Merrill aema-So	Logan
Peterson, Myrtle ho-F	Scipio
Peterson, Thelma ho-So	Portland, Oregon
Petersen, Vina c-F	Salt Lake City
Pippin, Roscoe, aema-V-Fed-ss	Gillette, Wyoming
Phillips, James W. ss	Sugar City, Idaho
Philips, Leila ss	Provo
Phillips, Olive A. ss	Logan
Pokriots, Eli D. aema-V-Fed	Denver, Colo.
Pond, Edith ss	Lewiston
Pond, Horace c-V	Lewiston
Pope, Gladys ss	Garden City
Pope, LeRoy B. a-V	Randolph
Porter, Alberta g-Un	Berkeley, Cal.
Porter, Jessie g-So	Rexburg, Idaho
Porter, Wilford D. g-S	Logan
Poulson, Moroni O. ss	St. Johns, Arizona
Poulter, Lenore ss	Logan
Poulter, Manilla ss	Logan
Poultney, Robert ss	Logan
Powell, A. H. aema-Un	Logan
Powell, Ethel ss	Ogden
Powell, Harold O, aema-sp-ss	Logan
Preece, Golden aema-V	Richmond
Preece, Howard a-V-Fed	Ogden
Price, Jackson a-J	Provo
Pugh, Beth g-F	Kanab
Pugh, Jesse Earle aema-J-ss-Fed	Monterey, Cal.
Pugh, Theresa g-F	Kanab
Pulley, Hamlet C. g-F	Logan
Quayle, James W. a-F	Logan
Querry, Hattie Bell ho-S-ss	Mt. Home, Idaho
Quinney, Conrad g-F	Logan
Ragner, Charles J. a-V-Fed	Salt Lake City
Rainey, Gladys ss	Logan
Rallison, Keneth a-V	Preston, Idaho
Rallison, Rebecca g-F	Logan
Rampton, Doyle H. aema-V	Garland
Ramsperger, Emma g-Un-ss	Logan
Randall, Earl A. a-V	Ogden
Randall, Lottie g-F	Ogden

	Ogden
Randall, Percy a-V	Glen Ellen, Cal.
Ranker, Emery A. a-So	Brigham
Rasmussen, Alma c-F	Logan
Rawlins, Alvira ss	Logan
Rawlins, Fern ss	Logan
Raymond, George aema-F	Logan
Raymond, Lorraine g-F	Ogden
Read, Walter T. c-Un	Hoytsville
Redden, Richard a-V-Fed	Payson
Reece, Jennie A. ho-S	Brigham
Reeder,Howard g-F	Benson
Rees, Florence g-F	Vernal
Reich, Ben aema-V-Fed	Abraham
Reid, Dalton M. a-V-ss-Fed	Ogden
Reid, George D. aema-J-ss-Fed	Ogden
Reid, Ralph A. a-V	Logan
Reid, Samuel R. a-V-ss-Fed	Youngstown, Ohio
Rendinell, Joseph E. a-V-Fed	Logan
Rex, Alfred E. c-F	Pueblo, Colo.
Rhoades, Walter a-V-Fed	Duchesne
Rice, James L. aema-V-ss-Fed	Logan
Rice, O. LeGrand aema-J	Logan
Rich, Elwood c-V	Logan
Rich, Geneva g-S	Logan
Rich, Irene g-G-ss	Logan
Rich, Juanita ss	Logan
Rich, Moses g-F	Mendon
Richards, Jennie ss	Logan
Richards, Nan L. g-V	Kamas
Richardson, Rufus D. a-S	Sandy
Richardson, Stanley S. a-F	Provo
Richins, Ellis W. aema-V-Fed	Logan
Ricks, Paul C. aema-So	Deeth, Nevada
Riddell, Donald aema-V	Newton
Rigby, Liberty ss	Newton
Rigby, Lula ss.	Logan
Rindlisbaker, Walter E. aema-V	Lewiston
Ririe, Boyd H. g-So	Logan
Ritchie, Gladys ho-F	Logan
Riter, William E. a-S	Bridger, Wyoming
Roberts, Harold a-V-Fed	Ogden
Roberts, Henry c-V-ss-Fed	Logan
Roberts, Lorin H. c-V	Logan
Robinson, Edith B. g-sp	Layton
Robins, Vernon A. g-F	Logan
Robinson, Kenneth C. c-So	Logan
Robinson, Lamond W. a-So	Fillmore
Robison, Almon D. a-V-Fed	Logan
Robison, M. Dorwin g-J	

Rochel, Albert aema-V-ss-Fed	Altonah
Rogers, Louise ho-So-ss	Logan
Romney, Pauline ho-F	Preston
Rose, Cora ss	Hyrum
Roseberry, Jesse M. a-V-Fed	Harris Station, Ohio
Rosengreen, Eldon J. aema-Un	Logan
Rosengreen, Harold A. g-So-ss	Logan
Rosengreen, Ruth ss	Logan
Ross, Ermon g-F	Richfield
Ross, Harold J. a-V-Fed	New York City, N. Y.
Rossiter, Ruth c-V-ss	Providence
Rott, Anton aema-V-ss-Fed	Chicago, Ill.
Roth, Albert c-V	Providence
Rowland, Priscilla ho-J	Logan
Rude, Clarence A. aema-V-ss-Fed	Ada, Minn.
Ruff, Enid E. ho-S-ss	Logan
Russell, Howard aema-F	Springville
Ruud, Edna ho-V	Logan
Ruud, Kathryn g-V	Logan
Sackett, Frank aema-V	Provo
Sandberg, Willard c-F	Huntington
Sandstrom, J. Roland ss	Logan
Sanford, Ralph B. a-J	Delta
Satterthwaite, Russell a-V	Garden City
Satterthwaite, Vella ss	Logan
Savage, J. Willlis ss	Hyrum
Sax, Ira Clayton a-V-Fed	Collbram, Colo.
Schaffner, Lulu G. aema-V-Fed	Casper, Wyoming
Schank, Leroy C. a-So	Providence
Schaub, G. Wesley aema-F	Logan
Scheby, Vera ho-F	Logan
Schiess, Alonzo a-V	Providence
Schlappy, H. Arnold a-J	Delta
Schow, Adolph c-F	Richmond
Scott, Thomas W. a-V-Fed	Granada, Colo.
Scowcroft, Ida g-Un	Ogden
Seager, Wm. K. a-So	Tremonton
Seegmiller, Charles R. a-J-ss-Fed	St. George
Seegmiller, W. Carlos aema-V	Ogden
Seely, Bertha g-So	Castle Dale
Seely, Bertrude g-So	Castle Dale
Seely, Dora ho-F	Castle Dale
Selby, Arthur J. a-V-ss-Fed	Sugar City
Sessions, Alice ho-So	Logan
Sessions, Alwyn C. a-So	Logan
Sessions, Elden B. ss	Logan
Sessions, Sarah ho-F	Logan
Sgro, Charles aema-F	Park City
Shaw, Clarke C. a-V-ss-Fed	Myton

Shepard, Dorothy g-F	Logan
Shepard, Idalah M. g-Sp	Logan
Sherman, Leland L. c-F	Huntington
Sherman, Vern A. aema-V-ss-Fed	Ogden
Sherrod, Annie ss	Salt Lake City
Shook, Louis A. aema-Un	Logan
Shy, William H. aema-V-ss-Fed	Cheyenne Wells, Colo.
Siegfried, Joshua F. aema-J	Brigham
Sjostrom, Harvey A. c-So	Logan
Sill, Sterling g-F	Layton
Simpson, Chancey W. aema-V	Iona, Idaho
Skanchy, Lillian ss	Logan
Skanchy, Alphonso g-F	Logan
Slack, Arthur a-V-ss-Fed	Toquerville
Slaugh, Forest S. a-S	Vernal
Slaugh, Kimball G. a-V	Vernal
Slaugh, Theresa ho-V	Logan
Smith, Ardella g-So	Logan
Smith, Arthur B. a-S	Logan
Smith, Bessie ss	Logan
Smith, Byron J. c-So	Logan
Smith, Della g-So	Logan
Smith, Douglas L. ss	Heber
Smith, Driver E. c-J	Logan
Smith, Elmer C. g-J	Logan
Smith, Farrell P. a-So	Richmond
Smith, Fred K. aema-V	Logan
Smith, Harold A. g-F	Pleasant Grove
Smith, Ida M. c-V	Smithfield
Smith, James S. aema-V-Fed	Garrison
Smith, J. Sermon c-V	Logan
Smith, Joseph F. aema-V	Providence
Smith, Lucile g-F	Logan
Smith, Marjorie g-F	Logan
Smith, Moroni W. a-J-ss	Parowan
Smith, Norma ho-So	Logan
Smith, R. Denton c-So	Logan
Smith, Roland B. g-So	Clearfield
Smith, Rulon a-So	Logan
Smith, S. Cooper a-F	Logan
Smith, Sylven R. aema-V-ss-Fed	Lehi
Smurthwaite, Grace ss	Salt Lake City
Smurthwaite, Una ss	Salt Lake City
Sobie, Steven aema-V-Fed	Denver, Colo.
Sorensen, Howard D. c-V-ss	Logan
Sorensen, Ina g-V	Logan
Sorenson, Ivan C. aema-V	Logan
Sorensen, Jens M. aema-V-ss-Fed	Erwin, S. Dakota
Sorenson, LaVelle ss	Smithfield

Sorenson, Lawrence J. g-So	St. Charles, Idaho
Sorenson, Lettie C. ss	Logan
Sorensen, Philip H. aema-F-ss-Fed	Ogden
Sorenson, Ruby ss	Smithfield
Sorensen, W. Gordon a-V	Centerfield
South, Mayme ss	Logan
Spande, Dorothy F. g-V-ss	Logan
Spande, Ruth g-Un	Logan
Spande, Sybil E. ss	Logan
Spencer, Elijah F. aema-Sp	Logan
Spencer, George Q. a-So	Salt Lake City
Spenny, Addison L. aema-V-ss-Fed	Logan
Spenst, Effie ss	Logan
Spenst, Lila ss	Logan
Sperry, Leo aema-V-Fed	Salt Lake City
Stafford, Earl E. a-V-ss-Fed	Lamesa, Texas
Stafford, Mae P. ss	Logan
Staker, Ernest V. a-J	Mt. Pleasant
Standing, Russell J. aema-So	Honeyville
Stanger, Albert G. c-J	Idaho Falls, Idaho
Stanton, Alonzo G. aema-V-Fed-ss	Hyrum
Starr, LeRoy a-So	Springville
Steele, Ida C. c-V	Logan
Steiner, Glendon E. c-F	Logan
Stevens, Agnes ho-F	Ogden
Stevens, C. H. aema-Un	Logan
Stevens, Justus M. a-Un	Fairview
Stevenson, Clifford A. aema-S	Logan
Stevenson, Frank J. a-F-Fed	Riverton
Stevenson, Sadie Bell g-J-ss	Logan
Stewart, George a-G	Logan
Stewart, Nellie ss	Tooele
Stobaugh, Frank M. a-V-Fed	Silt, Colorado
Stockdale, Leland g-J	Logan
Stock, Doyle Ernest aema-V	Logan
Stock, Josephine C. ho-So	Logan
Stock, Sidney R. g-S	Logan
Stockton, Cassel H. ss-Fed	Villegreen, Colo.
Stookey, Ella ho-F	Clover
Stout, Emerald W. ss	Blackfoot, Idaho
Strickland, John B. aema-V-ss-Fed	Albuquerque, N. Mexico
Strong, William J. a-V-Fed	American Fork
Stubbs, Peter K. a-V-Fed	Gunnison
Sumsion, Sara g-So	Chester
Sudbury, Reta ss	Salt Lake City
Sund, Edwin W. aema-V-Fed	Sandy
Sutherland, Allene ho-F-ss	Logan
Sutherland, Earl C. g-J	Logan
Sutherland, Francilda ho-Un	Logan

Sutherland, Thomas G. g-J	Logan
Swanson, Harry N. a-V-Fed	Henderson
Sweet, Archie M. a-V-Fed	McClave, Colo.
Swenson, Dan A. aema-G	Logan
Taggart, Ethelyn ss	Lewiston
Tanner, Arthur a-J	Payson
Taylor, Arthur C. ss	Loa
Taylor, Elmer J. g-Un	Collinston
Taylor, Melvin a-S-ss-Fed	Murray
Taylor, Elton a-So	Provo
Taylor, Viona ss	Fairview
Thacker, Fay E. a-V	Heber
Thain, Aldyth ss	Logan
Thain, G. Wendell c-S	Logan
Thain, J. Henry c-F	Logan
Thatcher, Jayne g-F-ss	Logan
Thatcher, J. Kenneth c-Un	Logan
Thatcher, Lionel g-V	Ogden
Thatcher, Martha g-Un	Logan
Thatcher, Reginald g-V	Logan
Thayne, Chester a-V-ss-Fed	Washington
Thibadean, Clarence B. a-V-Fed	Anaconda, Mont.
Thomas, Alta g-So	Heber
Tnomas, Elizabeth ss	Ogden
Thomas, Elvin D. a-F-ss-Fed	Victor, Idaho
Thomas, Frances g-F	Logan
Thomas, Luella ss	Ogden
Thomas, Martha ho-F	Logan
Thompson, David W. aema-V-ss-Fed	Enterprise
Thompson, Earl g-Un-ss	Logan
Thompson, Ezra C. aema-V-ss-Fed	St. George
Thompson, Fornatus O. a-V-Fed	Enterprise
Thompson, J. LaVille g-Un	Richmond
Thompson, Oney L. a-V-ss-Fed	May, Idaho
Thompson, Rose J. ho-Un-ss	Logan
Thompson, Wanda ho-F	Lewiston
Thomson, Wendell J. g-J	Richmond
Thorpe, Derle aema-V	Weston, Idaho
Thorpe, Everett g-V	Providence
Tingey, Delmar C. a-S	Brigham
Tingey, Mabel ho-F	Brigham
Tippetts, Alfred I. g-S	Hinckley
Titensor, Arvilla ss	Logan
Titus, Albert C. g-F	Logan
Tollestrup, A. Virgil g-So-ss	Cedar City
Tooth, Bessie ss	Manti
Tovey, Dan a-F	Malad
Townsend, Frank K. c-V-ss-Fed	Colorado Springs, Colo.
Trask, James W. aema-V-ss-Fed	Denver, Colo.

Trimble, Cuthbert ss	
Truman, Rex c-G	Fillmore
Tuckfield, Maud M. ss	Denver, Colo.
Tueller, Adolph c-So	Salt Lake City
Tueller, Gottfred J. a-So	Montpelier, Idaho
Tueller, Lamont a-F	Montpelier, Idaho
Turley, Ernest C. a-So	Paris, Idaho
Turner, Marriner C. g-F	Colo. Juarez Chih., Mexico
Varley, Wm. H. a-V-ss-Fed	Logan
Vernon, Aldyth g-G	Ogden
Vernon, Lais g-G	Logan
Vernon, Weston Jr. g-F	Logan
Vickers, Pearl c-Sp-ss	Logan
Vickers, Wallace J. g-G	Logan
Vitarizs, Frank P. a-V-ss-Fed	Logan
Vogelzang, John H. aema-V-ss-Fed	Idaho Fals, Idaho
Vowles, Ruth ss	Ogden
Wadsworth, Leda c-F	Tooele
Wagstaff, Evangeline ho-So	Ogden
Waldie, Walter C. a-V-Fed	Mt. Pleasant
Waldron, Golden R. g-Un	Colorado Springs, Colo.
Walker, Dilworth a-S	Morgan
Walker, Florence ss	Rexburg, Idaho
Walker, Rufus H. aema-V-ss-Fed	American Fork
Wall, Jessie ss	Sandy
Wall, John E. a-So	Colonia Juarez, Chih., Mexico
Wallace, Dosia W. a-V-Fed	Colonia Juarez, Chih., Mexico
Walters, Emmett J. a-V-Fed	Harwood, Mo.
Walther, Will C. aema-V	Colorado Springs, Colo.
Walton, Dewena g-F	Halleck, Nevada
Walton, Reuben H. c-V-ss-Fed	Afton, Wyoming
Wamsley, Lealon a-V-ss-Fed	Afton, Wyoming
Wanlass, Eva P. g-sp	Lander, Wyoming
Ward, Mary ss	Logan
Warr, Morell J. a-V	Malad, Idaho
Watt, Clifford a-So	Park City
Weatherston, Bertha ss	Sandy
Weaver, Orrin R. aema-V	Plain City
Webb, Alta ss	Bennington, Idaho
Wells, Edwin G. a-F	Richmond
West, Grant aema-F	Logan
West, J. Earl aema-V	Brigham
West, Lawrence M. c-So	Logan
West, Loyal A. a-V-Fed	Ogden
Westcott, Warren K. a-J	Ogden
Weston, Rex g-F	Salt Lake City
Wheeler, Jesse K. a-S	Laketown
Wheeler, Paul c-F	Murray
White, Dennis a-F	Ogden
	Brigham

	Mapleton
Whiting, Margaret ss	Midvale
Whitmore, Lynn S. aema-F	Logan
Whitney, Byron M. aema-V-ss	Morgan
Whittier, Alice ss	Logan
Whitworth, Leona g-Un	Deer Lodge Mont.
Whitworth, Marie c-So	Brigham
Wight, LaPreal g-F	Limon, Colo.
Wiley, Mark H. aema-F-Fed	Logan
Wilkes, Oliver c-F	Clearbrook, Minn.
Willesen, Wm. H. aema-So-ss-Fed	Logan
Williams, Agnes ho-J	Logan
Williams, John g-So	Mendon
Willie, Vernal a-S	Provo
Willie, Bertha ss	Logan
Willmore, Rebecca g-Sp	Jackson, Wyoming
Wilson, Charles A. aema-V	River Heights
Wilson, LeMoyne g-V	Logan
Wilson, LeRoy V. g-Un	Payson
Wilson, Leslie H. aema-V-ss-Fed	River Heights
Wilson, Milton T. aema-J	Logan
Wilster, Gunnar c-F	Logan
Winborg, James C. aema-V	Mt. Pleasant
Winkler, Aurel a-So	Lehi
Winn, Carl D. aema-J-Fed	Norwood, Ohio
Winnup, Robert H. a-V	Logan
Winsor, Luther M. aema-G	Manti
Wintch, Ardray M. aema-V-ss-Fed	Garland
Winters, Blaine g-Un	Logan
Wood, Catharine g-So	Woods Cross
Wood, Dolores ho-So	Clayton, New Mexico
Wood, John O. a-V-Fed	Logan
Wood, W. Edwin g-So	Smithfield
Woodruff, Leo C. c-V	Smithfield
Woodruff, Oliver C. a-F	Logan
Woodside, Howard M. aema-F	Logan
Woodside, Josephine ho-F	Logan
Woodside, Margaret ss	Logan
Woodside, T. Clyde c-F	Logan
Woodside, Thomas Clyde c-F	Logan
Woodward, Rollo a-F	Salt Lake City
Woolley, Lawrence F. ss	Grantsville
Woolley, Ray c-So	Logan
Wootton, David A. ss	Logan
Worley, K. Blanche ho-J	Logan
Worley, J. Clyde c-S	Logan
Worley, Margaret ss	Farmington
Worsley, John H. aema-V	Grantsville
Wrathall, Penina ho-S	Hinckley
Wright, H. Pratt a-So	

Wright, Sarah ss	Provo
Wunker, Henry A. c-Un	Evanston, Wyoming
Wyatt, Sidney L. a-F	Wellsvile
Yao, Hsing Huang ss	Shanghai, China
Yardley, Verda ss	Beaver
Yeates, Lorna ss	Logan
Yeates, Reva ss	Logan
Yonk, E. J. aema-Un	Logan
Young, Eugene H. a-V-Fed	Abraham
Young, John C. ss	Logan
Young, Karl E. g-F	Moab
Young, Mabel B. ss	Richmond
Young, Marion Luella ss	Richmond
Young, Vernon, a-S-ss-Fed	Monticello
Youngberg, Karl J. aema-V-Fed	Lyman, Wyoming

Summary of Attendance 1921-1922

	Agriculture Men	Agriculture Women	A. E. M. A. Men	Commerce Men	Commerce Women	General Science Men	General Science Women	Home Economics Women	TOTAL	GRAND TOTAL
Collegiate										
Graduates	10	......	8	7	......	9	5	2	41*	
Seniors	29	......	4	9	2	9	7	15	75	
Juniors	20	......	16	16	......	17	7	16	92	
Sophomores	41	......	15	22	2	16	18	31	145	
Freshmen	43	1	29	56	13	48	39	38	267	
Unclassified	12	......	15	15	3	15	20	16	96	
	155	1	87	125	20	114	96	118		716
Unclassed	189	......	187	35	11	22	20	17		481
Total	344	1	274	160	31	136	116	135		1197

*Total No. graduate stds., incl. Summer School was 66.

Summer School 1921—Men	269	
Women	205	474
Correspondence Department & Extension Classes—Men	405	
Women	371	776
		2447
Less Names Repeated—Men	212	
Women	58	270
Net Total		2177

CONVENTIONS AND SHORT COURSES

Farmers' Encampment Logan—Men	283	
Women	276	559
Short Practical Courses Logan—Men	52	
Women	44	96
Scout Masters School Logan—Men		69
Junior Extension Short Course—Boys	32	
Girls	36	68
Farmers' Convention Cedar City—Men	89	
Housekeepers' Conference Cedar City—Women	97	186
Net Total		978

INDEX

Page
Accounting and Business Practice 87
Accounting, Suggested Course in 81
Admission 38
Administration, Extension Division 64
Advanced Standing 38
Advertising, Courses in 82, 180
Agricultural Economics 94
Agricultural Engineering 97
Agricultural Engineering Experiment Station.................................. 62
Agricultural Surveying 97
Agronomy 103
Animal Husbandry 107
Art 113
Athletics 47, 51, 208
Auto Mechanics 118
Bacteriology 125
Banking, Suggested Course in 81
Board of Trustees 6, 36
Botany 128
Boys' and Girls' Clubs, Extension.................................. 64
Branch Agricultural College Faculty 29
Buildings 56
Business Administration 132
Business Administration, Suggested Course in.................................. 82
Buzzer Staff 240
Calendar, College 5
Chemistry 135
Class Standing 39
Clubs 48
College Council 37
College Proper 66
College Faculty 7, 36
Commencement, 1920-1921 Twenty-eighth Annual.................................. 235
Commencement, 1921-1922 Twenty-ninth Annual 237
Commerce and Business Administration, Suggested Courses in...... 81
Committees:
    Of the Board 6
    Of the Faculty 28
Community Service Bureau 64, 65
Correspondence-Study Department 64, 65
County Club Agents 64
County Agents 64
Courses of Instruction 87
Dairy Husbandry 139

Page
Deans' and Directors' Council 36
Debating 47, 49, 154, 139
Departments of Instruction 86
Doctor's Degree, Requirements for 44
Drill 51, 199
Economics 142
Education and Pedagogy 73, 146
Education, Suggested Course in 68
English 152
Entomology 156
Equipment 58
Expenses of Students 50
Experiment Station 61
Experiment Station Staff 23, 37
Extension Division 63
Extension Division Staff 25
Extension Methods, Graduate Course in 198
Faculty, College 7
Farm Bureau Presidents 31
Farm Management 94
Farm Mechanics 159
Foods and Dietetics 160
Forging and General Blacksmithing 187
French 202, 204
Geology 162
German 203, 205
Government of the College 36
Graduates, 1921 235
Graduates, 1922 237
Graduation 38, 42
Graduation at Close of Summer Quarter 43
Harness Repairing, Course in 197
History 165
History of the College 33
Holidays, see College Calendar 5
Home Economics, Suggested Course in 80
Home Demonstration, Extension 64
Honors, 1921-1922 239
Horticulture 168
House-Building 195
Household Administration 173
Irrigation and Drainage 176
Junior College Courses 41
Junior Class Standing 41
Laboratories, see Equipment 58
Latin 204
Library Economy 179
Library 59
List of Students, 1921-1922 241

Page
Location of the College 32
Lyceum 47
Machine Work 189
Marketing 180
Marketing, Suggested Course in 82
Master's Degree, Requirements for 43
Mathematics 184
Mechanical Drawing 191
Mechanic Arts 187
Methods in Experimentation and Extension 197
Military Science and Tactics 51, 199
Mineralogy 163
Modern Languages and Latin 202
Music 205
Musicals 47
Organization of the College 45
Organization of the College Proper 66
Office Management 92
Officers of the Board 6
Officers of Administration and Instruction 7
Oratorial Contests 47, 239
Physical Education 208
    For Men 208
    For Women 210
Physics 212
Physiography 162, 164
Physiology 214
Physiological Chemistry 125
Policy of the College 33
Political Science 215
Poultry Husbandry 111
Practical Courses, see Vocational Courses 79
Public Health 220
Public Speaking 218
Quarter Hours 41
Range Management 219
Recitation Table 85
Registration 40
Required Work for Graduation 75
Roads 98
Reserve Officers' Training Corps 51, 199
Rural Architecture 99
Rural Education 149
Rural Public Health 220
Rural Sanitation 102
Salesmanship, Courses in 82, 180
Schedule of Work Required for Graduation 75
Scholarship Honors 239
Scholarships and Awards 53

Page
School of Agriculture 67
School of Commerce and Business Administration 70
School of General Science 72
School of Home Economics 68
School of Mechanic Arts 71
Secretarial Work, Suggested Course in 83
Scoutmastership, Course in 147
Semester Hours 41
Senior College Courses 41
Smith-Hughes Act, Courses Under 83
Sociology 223
Spanish 203
Special Students 40
Standing Committees of the Board 6
Standing Committees of the Faculty 28, 37
Stenography 224
Student Body Officers 240
Student Life Staff 240
Student Body Organization 46
Student Clubs 48
Students, List of 241
Students, Obligation to State 38
Student Expenses 50
Student Publications 47
Suggested Courses 80
Summer Quarter 74
Summary of Attendance 271
Summary of Requirements for Graduation 75
Textiles and Clothing 225
Theatricals 47
Trade Courses 79
Trustees, Board of 6, 36
Typewriting 224
Veterinary Science 228
Vocational Courses 79
Vocational Courses, Admission to 40
Wood Work 195
Zoology 231

CENTURY PRINTING CO.
Salt Lake's Printers
SALT LAKE CITY, UTAH

Year-round Service

By offering four quarters of twelve weeks each, the Utah Agricultural College renders year-round service to Utah and the West. Students may enter at the beginning of any quarter and find new courses starting. It is best to begin with the Fall Quarter and continue until the close of school in the Spring. The Summer Quarter is now an integral part of the school year. It offers exceptional opportunities to those who desire to accumulate extra credits and thus hasten graduation.

The opening dates for the 1922-23 year are as follows:

Fall Quarter opens September 25.

Winter Quarter opens January 2.

Spring Quarter opens March 19.

Summer Quarter opens June 4.

UNIVERSITY OF ILLINOIS-URBANA
3 0112 112032666

Illustrated, descriptive circulars dealing with the work of the various Schools—Agriculture, Agricultural Engineering, Home Economics, Commerce, Mechanic Arts, General Science, and Summer School—and with Student Activities, are published. A special announcement describing in full the extensive work given by the College in teacher-training is also ready for distribution. Send to the President's Office for copies of the circulars in which you are interested.